```
=> d que l31
L7        13610 SEA FILE=HCAPLUS ABB=ON  PLU=ON  DEXTRAN+NT/CT
L11       31790 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "GROWTH FACTORS, ANIMAL"+OLD/C
                T
L14       24623 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                PROSTHETICS"+OLD/CT
L15        4540 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BONE FORMATION/CT
L16        3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                OLD,NT/CT
L17       20049 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "DENTAL MATERIALS AND
                APPLIANCES"+OLD/CT
L18         117 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                PROSTHETICS (L) MAXILLOFACIAL"/CT
L24       17023 SEA FILE=HCAPLUS ABB=ON  PLU=ON  EPIDERMAL GROWTH FACTOR/CT
L25       18840 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "INSULIN-LIKE GROWTH FACTOR"+N
                T/CT
L26        3481 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "FIBROBLAST GROWTH FACTOR"/CT

L27       21413 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "TRANSFORMING GROWTH FACTORS"+
                OLD,NT/CT
L28        8044 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLATELET-DERIVED GROWTH
                FACTORS"+OLD,NT/CT
L29        3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                OLD,NT/CT
L30          51 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L24 OR L25 OR L26 OR L27 OR
                L28 OR L29) OR L11) AND L7 AND (L14 OR L15 OR L16 OR L17 OR
                L18)
L31          43 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (BONE OR DENTAL? OR
                DENTIST? OR MANDIB? OR MAXILLOFAC? OR OSTEO?)

=> d ibib ab hitind l31 1-43

L31  ANSWER 1 OF 43  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:300930  HCAPLUS
TITLE:                    Improved bone graft
INVENTOR(S):              Knaack, David; Traianedes, Kathy; Diegman, Michele;
                          Forsyth, Nanette; Winterbottom, John
PATENT ASSIGNEE(S):       Osteotech, Inc., USA
SOURCE:                   PCT Int. Appl., 87 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     WO 2003030956      A2   20030417      WO 2002-US32941  20021015
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
```

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-329156P P 20011012
US 2002-392462P P 20020627

AB An improved demineralized **bone** matrix (DBM) or other matrix compn. is provided that has been mixed with a stabilizing agent that acts as (1) a diffusion barrier, (2) a enzyme inhibitor, (3) a competitive substrate, or (4) a masking moiety. A diffusion barrier acts as a barrier so as to protect the **osteoinductive** factors found in DBM from being degraded by proteolytic and glycolytic enzymes at the implantation site. Stabilizing agents may be any biodegradable material such as starches, modified starches, cellulose, dextran, polymers, proteins, and collagen. As the stabilizing agents degrades or dissolves in vivo, the **osteoinductive** factors such as TGF-.beta., BMP, and IGF are activated or exposed, and the activated factors work to recruit cells from the perivascular space to the site of injury and to cause differentiation into **bone**-forming cells. The invention also provides methods of prepg., testing, and using the inventive improved **osteoinductive** matrix compns.

IC ICM A61L027-00

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 9

ST demineralized **bone** matrix graft implant TGFbeta IGF BMP

IT INDEXING IN PROGRESS

IT **Bone**
(artificial; improved **bone** graft comprising a demineralized **bone** matrix)

IT Ceramics
(biocompatible; improved **bone** graft comprising a demineralized **bone** matrix)

IT Transplant and Transplantation
(**bone**; improved **bone** graft comprising a demineralized **bone** matrix)

IT Polymers
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(co-; improved **bone** graft comprising a demineralized **bone** matrix)

IT **Bone**
(demineralized; improved **bone** graft comprising a demineralized **bone** matrix)

IT Polyesters
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(glycolide-based; improved **bone** graft comprising a demineralized **bone** matrix)

IT Proteins
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(growth factor-binding; improved **bone** graft comprising a demineralized **bone** matrix)

IT Alkylating agents, biological
Antibiotics
Antitumor agents
Bone formation
Diffusion barrier

Drug delivery systems
Milling (size reduction)
Nutrients
Particle size distribution
Stabilizing agents
Virus
Wound healing promoters
(improved **bone** graft comprising a demineralized **bone** matrix)

IT Agglutinins and Lectins
Alkyl iodides
Angiogenic factors
Antibodies
Biopolymers
Bone morphogenetic proteins
Fatty acids
Lipids
Phosphatidylcholines
Polyesters
Polyethers
Polymers
Polysaccharides
Proteins
Transforming growth factors
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved **bone** graft comprising a demineralized **bone** matrix)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(improved **bone** graft comprising a demineralized **bone** matrix)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved **bone** graft comprising a demineralized **bone** matrix)

IT Enzymes
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; improved **bone** graft comprising a demineralized **bone** matrix)

IT Polyesters
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactide; improved **bone** graft comprising a demineralized **bone** matrix)

IT Sulfhydryl group
(modifiers; improved **bone** graft comprising a demineralized **bone** matrix)

IT Rat
(muscle of; improved **bone** graft comprising a demineralized **bone** matrix)

IT Polyethers
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-contg.; improved **bone** graft comprising a

demineralized **bone** matrix)

IT **Growth factors, animal**
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**osteogenins**; improved **bone** graft comprising a demineralized **bone** matrix)

IT Rabbit
(paravertebral space of; improved **bone** graft comprising a demineralized **bone** matrix)

IT Collagens
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sponge; improved **bone** graft comprising a demineralized **bone** matrix)

IT **Bone**
(transplant; improved **bone** graft comprising a demineralized **bone** matrix)

IT Polycarbonates
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tyrosine; improved **bone** graft comprising a demineralized **bone** matrix)

IT Macroglobulins
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.2-, stabilizing agent; improved **bone** graft comprising a demineralized **bone** matrix)

IT 9005-82-7, Amylose
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(-resistant starches; improved **bone** graft comprising a demineralized **bone** matrix)

IT 1306-06-5, Hydroxyapatite 7758-87-4, Tricalcium phosphate 7778-18-9, Calcium sulfate 10103-46-5, Calcium phosphate 13767-12-9, Tetracalcium phosphate
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ceramics; improved **bone** graft comprising a demineralized **bone** matrix)

IT 50-01-1, Guanidine hydrochloride 64-69-7, Iodoacetic acid 74-88-4, Methyl iodide 3483-12-3, Dithiothreitol 9000-94-6, Antithrombin iii 9002-89-5, Polyvinyl alcohol 9003-16-1, polyfumaric acid 9004-34-6, Cellulose **9004-54-0**, Dextran 9005-25-8, starch 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Lactic acid-glycolic acid copolymer **61912-98-9**, Igf 81627-83-0, Mcsf
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved **bone** graft comprising a demineralized **bone** matrix)

IT 147783-67-3 154039-60-8, BB 2516 162514-46-7, CT1746 169799-04-6, CGS 27023A 179545-77-8, BAY 12-9566 190648-49-8, Ro 32-3555 191406-88-9, SE205 192329-42-3, AG3340
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved **bone** graft comprising a demineralized **bone** matrix)

IT 54249-88-6, Dipeptidylpeptidase iv

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors, stabilizing agents; improved **bone** graft comprising a demineralized **bone** matrix)

IT 9028-35-7
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (inhibitors, statins; improved **bone** graft comprising a demineralized **bone** matrix)

IT 9001-92-7, Proteinase 9004-08-4, Cathepsin 9032-92-2, Glycosidase 141907-41-7
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; improved **bone** graft comprising a demineralized **bone** matrix)

IT 55-91-4, Diisopropylfluorophosphate 60-32-2, .epsilon.-Aminocaproic acid 66-71-7, 1,10-Phenanthroline 67-42-5, Egta 128-53-0, N-Ethylmaleimide 139-33-3 329-30-6, 1-Chloro-3-tosylamido-4-phenyl-2-butanone 329-98-6, phenylmethylsulfonyl fluoride 1670-14-0, Benzamidine hydrochloride 2364-87-6 8001-27-2, Hirudin 9035-81-8, Trypsin inhibitor 9041-92-3, .alpha.1-Antitrypsin 9076-44-2, Chymostatin 9087-70-1, Aprotinin 26305-03-3, Pepstatin a 34284-75-8, 4-(2-Aminoethyl)benzenesulfonyl fluoride 36357-77-4, Phosphoramidon 37691-11-5, Antipain 51798-45-9, Elastatinal 55123-66-5, Leupeptin 58970-76-6, Bestatin 66701-25-5, E-64 76684-89-4, e-64c 76808-15-6, Ebelactone b 76808-16-7, Ebelactone a 88321-09-9, e-64d 90614-48-5, Diprotin a 96551-81-4, Arphamenine A 100157-28-6, Foroxymithine 103900-19-2, Arphamenine B 110044-82-1, Calpain inhibitor I 110115-07-6, Calpain inhibitor ii 129085-76-3, leuhistin 134448-10-5, ca-074 141176-92-3, .alpha.1-Antichymotrypsin 187402-73-9, Phebestin
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (stabilizing agent; improved **bone** graft comprising a demineralized **bone** matrix)

L31 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:282718 HCAPLUS
DOCUMENT NUMBER: 138:282352
TITLE: Traversal of nucleic acid molecules through a tissue fluid space and expression in repair cells
INVENTOR(S): Sosnowski, Barbara A.; Pierce, Glenn
PATENT ASSIGNEE(S): Selective Genetics, Inc., USA
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029429	A2	20030410	WO 2002-US31546	20021002

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-327513P P 20011003

AB Disclosed are methods for use in transferring nucleic acids into cells at a wound site assocd. with a fluid space. These gene transfer protocols are suitable for use in transferring various nucleic acids into cartilage, cardiac muscle, and other tissues, and have many uses including treating diseases such as arthritis and ischemic heart disease, and promoting wound healing. The invention further disclosed pharmaceutical compns. that may be used in the practice of the invention to transfer the nucleic acid of interest. Such compns. include any multi-partitioned biocompatible matrix in combination with multiple nucleic acids of interest. Thus, collagen collagen-immobilized fibroblast growth factor (FGF) genes induce angiogenesis in vitro, and FGF gene delivery to skeletal muscle wounds induces both angiogenesis and arteriogenesis and well as induces myocyte regeneration.

IC ICM C12N

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(10, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(6, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(8, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(9, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Prosthetic materials and Prosthetics**
(bioactive glass, biocompatible; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chondromodulins, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT Angiogenesis
Bone formation
Regeneration, animal
Wound healing
(gene therapy for stimulation of; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding BMP-12; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding BMP-13; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT Antibodies
Bone morphogenetic proteins
Growth factor receptors
Growth factors, animal
Hepatocyte growth factor
Hormones, animal, biological studies
Insulin-like growth factor receptors
Interleukin 1
Interleukin 6
Interleukin 8
Interleukins
Leukemia inhibitory factor
Platelet-derived growth factors
Transcription factors
Transforming growth factors
Tumor necrosis factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(skeletal growth factors, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT Adenoviral vectors
Antiarthritics
Bone
Cartilage
Gene therapy
Heart
Plasmid vectors
Retroviral vectors
Wound
Wound healing promoters
(traversal of nucleic acid mols. through a tissue fluid space and

expression in repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.2-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT 1306-06-5, Hydroxyapatite 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-20-7, Polyvinylacetate 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronan 9004-67-5, Methyl cellulose 9005-32-7, Alginic acid 9012-76-4, Chitosan 9016-00-6, Poly(dimethylsiloxane) 11098-82-1, Aluminate 24937-78-8, Poly(ethylene-vinyl acetate) 25322-68-3, Polyethylene glycol 25852-47-5, Hydrogel 26100-51-6, Lactic acid polymer 26124-68-5, Glycolic acid polymer 31900-57-9, Poly(dimethylsiloxane) 34346-01-5, Lactic acid-Glycolic acid copolymer 124586-38-5, Hydrogel
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biocompatible; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT 9001-27-8, Blood-coagulation factor VIII 9001-28-9, Blood-coagulation factor IX 9002-64-6, Parathyroid hormone 9002-72-6, Growth hormone 11096-26-7, Erythropoietin 57285-09-3, Inhibin **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor **62229-50-9**, Epidermal growth factor **67763-96-6**, Insulin-like growth factor I **67763-97-7**, Insulin-like growth factor II 81627-83-0, Macrophage-colony stimulating factor 83869-56-1, Granulocyte-macrophage-colony stimulating factor 103370-86-1, Parathyroid hormone-related peptide 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 127464-60-2, Vascular endothelial growth factor 139639-23-9, Tissue plasminogen activator 189460-40-0, Connective tissue-growth factor 252959-51-6, Growth differentiation factor 11
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

L31 ANSWER 3 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:260864 HCAPLUS
DOCUMENT NUMBER: 138:276278
TITLE: Lipophilic-coated microparticles containing a protein drug
INVENTOR(S): Kim, Myung-Jin; Kim, Sun-Jin; Kwon, Kyu-Chan; Kim, Joon
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S.

Ser. No. 648,196, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003064105	A1	20030403	US 2002-160784	20020603

PRIORITY APPLN. INFO.: US 2000-648196 B2 20000825

AB A solid lipophilic microparticle having an av. particle size ranging 0.1-200 .mu.m, comprises a lipophilic substance, hyaluronic acid or an inorg. salt and an active ingredient selected from the group consisting of a protein or peptide drug. The microparticle retains the full activity of the active ingredient, and when formulated in the form of an oil dispersion or an oil-in-water emulsion, it releases in an in vivo environment the active ingredient in a controlled manner over a long period. Human growth hormone (hGH) was dissolved in 5 mM PBS to a concn. of 2 mg/mL and then Tween 80 was added thereto at 0.01 wt. % based on the wt. of PBS. Sodium hyaluronate having a mol. wt. of 1,000,000 was dissolved therein to a concn. of 0.2% (w/v). The resulting soln. was provided to a spray dryer at a flow rate of 3 mL/min to obtain primary particles. In this step, the inflow air temp. was 85.degree.. The av. particle size of the primary particles thus obtained was 3 .mu.m. Lecithin was dissolved in ethanol to a concn. of 1% and then the primary particles were suspended therein at a concn. of 1%. The av. particle size of the microparticles thus obtained was 7 .mu.m.

IC ICM A61K039-395
ICS A61K038-21; A61K038-19; A61K038-28; A61K009-16; A61K009-50; A61K045-00; C08B037-00; C07H001-00; C07G001-00; A61K038-00
NCL 424493000; 424085100; 424130100; 424085400; 514003000; 514012000; 536053000
CC 63-6 (Pharmaceuticals)
IT Albumins, biological studies
Bone morphogenetic proteins
Cod liver oil
Corn oil
Cottonseed oil
Diglycerides
Edible oils
Fatty acids, biological studies
Gelatins, biological studies
Glycerides, biological studies
Interferons
Interleukins
Lecithins
Lipids, biological studies
Monoglycerides
Olive oil
Paraffin oils
Peanut oil
Peptides, biological studies
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylserines
Polyoxyalkylenes, biological studies

Proteins
Safflower oil
Soybean oil
Sunflower oil
Tumor necrosis factors
Waxes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipophilic-coated microparticles contg. protein drugs)

IT 50-70-4, Sorbitol, biological studies 50-99-7, Glucose, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-86-0, Glutamic acid, biological studies 56-87-1, Lysine, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Saccharose, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 69-65-8, Mannitol 69-79-4, Maltose 74-79-3, Arginine, biological studies 99-20-7, Trehalose 111-01-3, Squalane 111-02-4, Squalene 544-63-8, Myristic acid, biological studies 1338-43-8, Sorbitan monooleate 9002-72-6, Somatotropin 9004-10-8, Insulin, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-65-6, Tween 80 9007-28-7, Chondroitin sulfate 9034-39-3, Growth hormone releasing hormone 9039-53-6, Urokinase 9067-32-7, Sodium hyaluronate 11096-26-7, Erythropoietin 11099-07-3, Glyceryl stearate 25322-68-3, Polyethylene glycol 26266-57-9, Sorbitan palmitate 31799-91-4, Potassium hyaluronate 56451-84-4, Sorbitan stearate **61912-98-9**, Insulin-like growth factor **62229-50-9**, Epidermal growth factor 63660-98-0, Calcium hyaluronate 66419-50-9, Bovine growth hormone **67763-96-6**, Insulin-like growth factor I 80966-39-8, Magnesium hyaluronate 81627-83-0, Macrophage-colony stimulating factor 83869-56-1, Granulocyte macrophage-colony stimulating factor 95685-92-0, Ammonium hyaluronate 97793-28-7, Atriopeptin-III 126467-48-9, Porcine growth hormone 139639-23-9, Tissue plasminogen activator 143011-72-7, Granulocyte-colony stimulating factor 177402-92-5, Zinc hyaluronate 205069-30-3, Cobalt hyaluronate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipophilic-coated microparticles contg. protein drugs)

L31 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:695831 HCAPLUS
DOCUMENT NUMBER: 137:237785
TITLE: Porous beta-tricalcium phosphate granules for **bone** implantation, and methods for producing same
INVENTOR(S): Dalal, Paresh S.; Dimaano, Godofredo R.; Toth, Carol Ann; Kulkarni, Shailesh C.
PATENT ASSIGNEE(S): Stryker Corporation, USA
SOURCE: PCT Int. Appl., 151 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002070029	A2	20020912	WO 2002-US5827	20020226

WO 2002070029 A3 20030206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003049328 A1 20030313 US 2001-798518 20010302
PRIORITY APPLN. INFO.: US 2001-798518 A 20010302
US 2001-960789 A 20010921

AB A porous .beta.-tricalcium phosphate material for **bone** implantation is provided. The multiple pores in the porous TCP body are sep. discrete voids and are not interconnected. The pore size diam. is in the range of 20-500 .mu.m, preferably 50-125 .mu.m. The porous .beta.-TCP material provides a carrier matrix for bioactive agents and can form a moldable putty compn. upon the addn. of a binder. Preferably, the bioactive agent is encapsulated in a biodegradable agent. The invention provides a kit and an implant device comprising the porous .beta.-TCP, and a bioactive agent and a binder. The invention also provides an implementable prosthetic device comprising a prosthetic implant having a surface region, a porous .beta.-TCP material disposed on the surface region optionally comprising at least a bioactive agent or a binder. Methods of producing the porous .beta.-TCP material and including **bone** formation are also provided.

IC ICM A61L027-12
ICS A61L027-56
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 2, 15
ST **bone** implant porous beta tricalcium phosphate granule sequence

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(2; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(3; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(4; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(5; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(6; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(7; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Nucleic acids
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(BMP-encoding; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Carbohydrates, biological studies
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aldonic acids, polymer; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Transplant and Transplantation
(allotransplant; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polyesters, biological studies
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(arom.; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone**
Hip
(artificial; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Transplant and Transplantation
(autotransplant; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polymers, biological studies
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biodegradable; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Glues
(fibrin-contg.; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Drug delivery systems
(granules; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Drug delivery systems
Prosthetic materials and Prosthetics
(implants; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Putty
(medical; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polyethers, biological studies

RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-contg.; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenins**; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polyimides, biological studies
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyanhydride-; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polyanhydrides
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyimide-; porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Binders
Encapsulation
Granulation
Mammalia
Molecular weight distribution
Particle size distribution
Porosity
Prosthetic materials and Prosthetics
Protein sequences
Sieving
Sintering
Sublimation
cDNA sequences
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Gelatins, biological studies
Glycosaminoglycans, biological studies
Mucins
Peptides, biological studies
Petrolatum
Polyamides, biological studies
Polyoxyalkylenes, biological studies
Polysaccharides, biological studies
Polyurethanes, biological studies
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT Polyvinyl butyrals
RL: NUU (Other use, unclassified); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone**

implantation)
IT Interleukin 6
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT Collagens, biological studies
Polyanhydrides
Polyphosphazenes
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT Drug delivery systems
(powders; porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT Fats and Glyceridic oils, biological studies
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sesame; porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT Drug delivery systems
(sustained-release; porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT **Transforming growth factors**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(.beta.-; porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT 9001-78-9, Alkaline phosphatase
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**osteogenesis** marker; porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT 7758-87-4, .beta.-Tricalcium phosphate
RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT 69-65-8, Mannitol **9004-54-0**, Dextran, biological studies
9004-61-9, Hyaluronic acid 9004-62-0, Hydroxyethylcellulose 9004-65-3, Hydroxypropyl methylcellulose 9005-38-3, Sodium alginate 9007-28-7, Chondroitin sulfate 9012-76-4, Chitosan 9032-42-2, Hydroxyethyl methylcellulose 9041-56-9, Hydroxybutyl methylcellulose 9050-04-8 9067-32-7, Sodium hyaluronate 9078-35-7 24991-23-9 25322-68-3, Polyethylene glycol 25513-46-6, Polyglutamic acid 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5 52352-27-9, Polyhydroxybutyric acid 78644-42-5, Polymalic acid 106392-12-5, Poloxamer
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)
IT 9002-89-5, Polyvinyl alcohol 9003-39-8, Polyvinylpyrrolidone

9004-36-8, Cellulose acetate butyrate 9005-25-8, Starch, uses
RL: NUU (Other use, unclassified); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT 50-23-7, Hydrocortisone 50-28-2, Estradiol, biological studies 57-83-0, Progesterone, biological studies 302-79-4, Retinoic acid 1406-16-2, Vitamin d 9002-64-6, Pth 9002-72-6, Growth hormone 9004-10-8, Insulin, biological studies **62031-54-3**, Fgf **67763-96-6**, Igf-i
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT 9003-01-4D, Polyacrylic acid, derivs. 24937-78-8, Ethylene-vinyl acetate copolymer 24980-41-4, Poly(caprolactone) 25248-42-4, Poly(caprolactone) 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26063-00-3, Polyhydroxybutyrate 26161-42-2 26202-08-4, Polyglycolide 26680-10-4, Poly(D,L-lactide) 26744-04-7 26780-50-7, Polyglactin 29223-92-5, Poly(p-dioxanone) 31852-84-3, Poly(trimethylene carbonate) 33135-50-1, Poly(L-lactide) 41706-81-4, Poly(..epsilon..-caprolactone-glycolide) 50862-75-4, Poly(oxycarbonyloxy-1,3-propanediyl) 75734-93-9, Poly(glycolide-trimethylene carbonate) 129515-24-8, Poly(D,L-lactide-trimethylene carbonate)
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(porous .beta.-tricalcium phosphate granules for **bone** implantation)

IT 458061-50-2
RL: PRP (Properties)
(unclaimed nucleotide sequence; porous beta-tricalcium phosphate granules for **bone** implantation, and methods for producing same)

IT 458061-41-1 458061-42-2 458061-43-3 458061-44-4 458061-45-5 458061-46-6 458061-47-7 458061-48-8 458061-49-9
RL: PRP (Properties)
(unclaimed protein sequence; porous beta-tricalcium phosphate granules for **bone** implantation, and methods for producing same)

L31 ANSWER 5 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:533944 HCAPLUS
DOCUMENT NUMBER: 137:99052
TITLE: Hybrid matrix implants and explants
INVENTOR(S): Mineau-Hanschke, Rochelle
PATENT ASSIGNEE(S): Trans Karyotic Therapies, Inc., USA
SOURCE: U.S., 29 pp., Cont.-in-part of U. S. Ser. No. 312,246.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6419920	B1	20020716	US 1999-413715	19991005
US 5965125	A	19991012	US 1995-548002	19951025

NZ 502455 A 20010126 NZ 1996-502455 19961025
US 6472181 B1 20021029 US 1999-312246 19990514
WO 2001024842 A2 20010412 WO 2000-US27362 20001004
WO 2001024842 A3 20010830
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 2000078545 A5 20010510 AU 2000-78545 20001004
BR 2000014503 A 20020611 BR 2000-14503 20001004
EP 1221937 A2 20020717 EP 2000-968669 20001004
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL
JP 2003511100 T2 20030325 JP 2001-527841 20001004
US 2003077260 A1 20030424 US 2002-188628 20020702
PRIORITY APPLN. INFO.: US 1995-548002 A3 19951025
US 1999-312246 A2 19990514
NZ 1996-321417 19961025
US 1999-413715 A1 19991005
US 2000-662037 A1 20000914
WO 2000-US27362 W 20001004

AB A compn. has a body of matrix material made up of insol. collagen fibrils, and disposed therewithin (a) a plurality of vertebrate cells; (b) a plurality of microspheres; and (c) an agent such as a factor that promotes vascularization, a cytokine, a growth factor, or ascorbic acid.

IC ICM A01N063-00
ICS A61F013-00; C12N005-00; A61K048-00
NCL 424093210
CC 63-7 (Pharmaceuticals)
IT Astrocyte
Chondrocyte
Epithelium
Fibroblast
Ganglion
Hematopoietic precursor cell
Human
Myoblast
Neuroglia
Osteoblast
Vaccines
(hybrid matrix implants and explants)
IT Angiogenic factors
Collagen fibers
Collagens, biological studies
Cytokines
Enzymes, biological studies
Fibrins
Gelatins, biological studies
Glass, biological studies
Growth factors, animal
Peptides, biological studies
Platelet-derived growth factors

Polyoxyalkylenes, biological studies
Polysulfones, biological studies
Proteoglycans, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hybrid matrix implants and explants)

IT **Prosthetic materials and Prosthetics**
(implants; hybrid matrix implants and explants)

IT **Transforming growth factors**
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-; hybrid matrix implants and explants)

IT **Transforming growth factors**
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; hybrid matrix implants and explants)

IT 50-81-7, Ascorbic acid, biological studies 9001-27-8, Factor VIII 9001-45-0, .beta.-Glucuronidase 9002-68-0, Fsh 9003-05-8, Polyacrylamide 9003-53-6, Polystyrene 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-35-0, Calcium alginate 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 9025-35-8, .alpha.-Galactosidase 9025-60-9, Chondroitin 6-sulfatase 9031-11-2, .beta.-Galactosidase 9041-92-3, .alpha.1-Antitrypsin 9050-30-0, Heparan sulfate 9073-56-7, .alpha.-Iduronidase 9077-06-9, Heparan N-sulfatase 12629-01-5, Human growth hormone 24937-78-8, Eva 25249-16-5, Poly(2-hydroxyethyl methacrylate) 25322-68-3, Peg 26780-50-7, Glycolide-lactide copolymer 37228-64-1, .beta.-Glucosylceramidase 37288-40-7, .alpha.-N-Acetylglucosaminidase 57680-56-5, Sucrose octasulfate 60320-99-2, N-Acetylglucosamine 6-sulfatase **62229-50-9**, Egf 72025-60-6, Leukotriene C4 79955-83-2, Acetyl CoA:.alpha.-Glucosaminide N-acetyltransferase 106096-92-8, Acidic fibroblast growth factor 106096-93-9, Basic fibroblast growth factor 106956-32-5, Oncostatin M 127464-60-2, Vascular endothelial growth factor 143011-72-7, G-CSF 188417-84-7, VEGF C 192662-83-2, Vascular endothelial growth factor B 193363-12-1, Vegf D
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hybrid matrix implants and explants)

IT 9002-64-6, Parathyroid hormone 9004-10-8, Insulin, biological studies 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin **67763-96-6**, Insulin like growth factor 1 169494-85-3, Leptin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hybrid matrix implants and explants)

REFERENCE COUNT: 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:502732 HCAPLUS
DOCUMENT NUMBER: 137:58022
TITLE: Cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide
INVENTOR(S): Glorioso, Joseph C.; Evans, Christopher H.; Robbins, Paul D.; Kane, Richard
PATENT ASSIGNEE(S): University of Pittsburgh of the Commonwealth System of Higher Education, USA

SOURCE: U.S., 55 pp., Cont.-in-part of U.S. 5,858,355.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6413511	B1	20020702	US 1995-466932	19950606
US 5858355	A	19990112	US 1995-381603	19950127
CA 2224176	AA	19961212	CA 1996-2224176	19960605
WO 9639196	A1	19961212	WO 1996-US8899	19960605
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9661522	A1	19961224	AU 1996-61522	19960605
AU 720762	B2	20000608		
EP 828518	A1	19980318	EP 1996-919090	19960605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000500641	T2	20000125	JP 1997-501361	19960605

PRIORITY APPLN. INFO.:

US 1990-630981	B2	19901220
US 1992-963928	B1	19921020
US 1993-27750	B2	19930308
US 1994-183563	B2	19940118
US 1995-381603	A2	19950127
US 1995-466932	A	19950606
WO 1996-US8899	W	19960605

AB The invention concerns a method of introducing at least one DNA sequence expressing a protein or protein fragment which substantially alleviates articular cartilage defects. The protein fragment of polypeptide could be TGF-.beta.1 or IRAP glycoprotein. This method involves in vitro culture of chondrocytes, transfection of the chondrocytes with a recombinant vector housing the DNA sequence to be expressed, and delivery of the transfected chondrocytes to the damaged cartilage region. This method can also be used in tandem with synovial cell delivery techniques of the invention. This method is also useful as a model in animal studies regarding joint pathologies.

IC A61K048-00; A01K067-00; A01N063-00; C12N015-00
NCL 424093200
CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 3
IT **Bone morphogenetic proteins**
Interleukin 1 receptors
Interleukin 10
Interleukin 13
Interleukin 4
Polynucleotides
Tumor necrosis factor receptors
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)
IT **Transforming growth factors**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-; cartilage alterations by administering to joints

chondrocytes comprising a heterologous polynucleotide)

IT **Transforming growth factors**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-; cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)

IT **Transforming growth factors**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.2-; cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)

IT **Transforming growth factors**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.3-; cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)

IT **62031-54-3**, Fibroblast growth factor **67763-96-6**, Insulin-like growth factor I 124861-55-8, TIMP-2 140208-24-8, TIMP-1 145809-21-8, TIMP-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)

IT 7757-93-9 9002-04-4, Thrombin **9004-54-0**, Dextran, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cartilage alterations by administering to joints chondrocytes comprising a heterologous polynucleotide)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 7 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:482991 HCAPLUS
DOCUMENT NUMBER: 137:52468
TITLE: Crosslinkable macromers for preparation of matrixes for implanted articles
INVENTOR(S): Chudzik, Stephen J.; Clapper, David L.
PATENT ASSIGNEE(S): Surmodics, Inc., USA
SOURCE: U.S., 14 pp., Cont.-in-part of U. S. 6,156,345.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6410044	B1	20020625	US 2000-571525	20000516
US 6007833	A	19991228	US 1998-121248	19980723
US 6156345	A	20001205	US 1999-469976	19991221
WO 2002100453	A1	20021219	WO 2001-US18345	20010607

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2003031697 A1 20030213 US 2002-176203 20020620

PRIORITY APPLN. INFO.: US 1998-78607P P 19980319
US 1998-121248 A3 19980723
US 1999-469976 A2 19991221
US 2000-571525 A1 20000516

AB A crosslinkable macromer system and related methods of prepg. the system and using the system in the form of a crosslinked matrix between a tissue site and an implant article, such as a tissue implant or on the porous surface of a prosthetic device, is described. The macromer system includes two or more polymer-pendent polymerizable groups and one or more initiator groups (e.g., polymer-pendent initiator groups). The polymerizable groups and the initiator group(s), when polymer-pendent, can be pendent on the same or different polymeric backbones. The macromer system provides advantages over the use of polymerizable macromers and sep., low mol. wt. initiators, including advantages with respect to such properties as nontoxicity, efficiency, and soly. A macromer system of the invention can be used as an interface between the tissue site and implant article in a manner sufficient to permit tissue growth through the crosslinked matrix and between the tissue site and implant. In a preferred embodiment, polymers with pendent polymerizable groups, for use in the macromer system, are prepd. by reacting a polysaccharide polymer with a reactive moiety in an org., polar solvent, such as formamide. For example, a biodegradable tissue adhesive was prepd. contg. (i) 5% polymerizable hyaluronic acid, prepd. by reaction of hyaluronic acid and glycidyl acrylate in dry formamide, and (ii) 2% photoderivatized polyacrylamide, prepd. from acrylamide and N-(3-aminopropyl)methacrylamide (APMA). The max. force generated by the adhesive prepd. was 0.53 kg compared to 0.49 kg obtained for cyanoacrylate adhesive. Also, the photoderivatized polyacrylamide prepd. was used in combination with polymerizable collagen (a reaction product of a mixt. of type I and type III collagen with acryloyl chloride) for prepn. of a scaffold contg. **bone** morphogenetic protein (BMP-7). The exptl. disks of solidified collagen scaffold contg. BMP-7 stimulated **bone** formation in a rat cranial onlay implant model.

IC ICM A61F002-06
ICS A61F002-28; A61F013-00; A61F047-30

NCL 424423000

CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 35, 36

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; prepn. of crosslinkable macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **Prosthetic materials and Prosthetics**
(implants, vascular; prepn. of crosslinkable macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **Dental materials and appliances**
Prosthetic materials and Prosthetics
(implants; prepn. of crosslinkable macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Animal tissue
Antibacterial agents
Antimicrobial agents

Bone formation
Crosslinking
Immobilization, molecular
Polymerization catalysts
Transplant and Transplantation
Wound healing promoters
(prepn. of crosslinkable macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate 9012-76-4, Chitosan 9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24967-94-0, Dermatan sulfate
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. of crosslinkable macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 8 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:409132 HCAPLUS
DOCUMENT NUMBER: 136:391057
TITLE: Drug release from polymer matrixes through mechanical stimulation
INVENTOR(S): Lee, Kuen Yong; Mooney, David J.
PATENT ASSIGNEE(S): The Regents of the University of Michigan, USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002064559	A1	20020530	US 2001-983320	20011024
WO 2002078601	A2	20021010	WO 2001-US51603	20011026
WO 2002078601	C1	20021107		
WO 2002078601	A3	20030227		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-243813P P 20001027

AB A method for drug delivery and polymer matrix suited to the method are disclosed. The polymer matrix has reversibly bound thereto a drug or combination of drugs, and is capable of releasing the drug or combination of drugs in response to mech. stimulation of the polymer matrix. According to the method of this invention, such a polymer matrix is delivered to an in vivo locus, e.g., the site of a wound, trauma, etc., and mech. stimulation of said polymer matrix is effected in vivo, thereby releasing the drug or combination of drugs in the area of the in vivo

locus. Alginate hydrogels were prepd. comprising Protanal, Trypan blue as a model drug, and CaSO4. One group of the sample hydrogels were subjected to mech. stimulation comprising three cycles of compression/relaxation by using a mech. tester. Release of the trypan blue drug from the compressed hydrogels increased steadily over the course of compression/relaxation cycles.

IC ICM A61K031-727
ICS A61K009-14

NCL 424486000

CC 63-6 (Pharmaceuticals)

IT **Bone morphogenetic proteins**
Collagens, biological studies
Fibrins
Gelatins, biological studies
Growth factors, animal
Platelet-derived growth factors
Polymers, biological studies
Proteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug release from polymer matrixes through mech. stimulation)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; drug release from polymer matrixes through mech. stimulation)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-35-0, Calcium alginate 9005-38-3D, Sodium alginate, heparin conjugates 9005-49-6D, Heparin, alginate conjugates 9012-36-6, Agarose 9019-41-4, Barium alginate 9057-02-7, Pullulan 9061-61-4, Nerve growth factor 37251-44-8, Magnesium alginate 54077-22-4, Strontium alginate 106096-93-9, Basic fibroblast growth factor 127464-60-2, Vascular endothelial growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug release from polymer matrixes through mech. stimulation)

L31 ANSWER 9 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:353301 HCAPLUS
DOCUMENT NUMBER: 136:359642
TITLE: Mineralized collagen-polysaccharide matrix for **bone** and cartilage repair
INVENTOR(S): Liu, Lin Shu; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036147	A1	20020510	WO 2001-US42477	20011005

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002011850 A5 20020515 AU 2002-11850 20011005

PRIORITY APPLN. INFO.: US 2000-703438 A 20001031
WO 2001-US42477 W 20011005

AB A matrix and a method for prepg. it are provided to support the growth of tissue, such as **bone**, cartilage or soft connective tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to mineralized collagen. The matrix can be implanted or injected, or the polyaldehyde polysaccharide and mineralized collagen starting minerals can be sep. injected to form the matrix in situ. Mineralized Type I collagen and polysaccharide-polyaldehyde were prepd. by mixing collagens with hyaluronate-polyaldehyde soln. Sodium cyanoborohydride was added to the mixt. to the final concn. of 10 mM. The resulting slurry was then poured into a mold and lyophilized. This formed a matrix, which was washed with water to remove NaCNBH3 and re-lyophilized. The surface property, structures and biol. activity of the matrixes were controlled by altering the ratio of the collagen to the polysaccharides, the type of polysaccharides, the d. of aldehyde groups generated on the polysaccharides, the d. of matrix, as well as the process of lyophilization.

IC ICM A61K038-16
ICS A61K038-17; A61K009-14; A61K035-14

CC 63-6 (Pharmaceuticals)

ST mineralized collagen polysaccharide matrix **bone** cartilage repair

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ADMP 1; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Prosthetic materials and Prosthetics**
(implants; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Bone**
Cartilage
Drying
Freeze drying
(mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Bone morphogenetic proteins**
Fibrins
Growth factors, animal
Interleukins
Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Polysaccharides, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(oxidized, reaction products with collagens; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Collagens, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(reaction products with polysaccharides; mineralized

collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Connective tissue
(soft; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Drug delivery systems
(sustained-release; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Collagens, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type I, reaction products with polysaccharides; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Collagens, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type II, reaction products with polysaccharides; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **9004-54-0DP**, Dextran, reaction products with collagens
9004-61-9DP, Hyaluronic acid, reaction products with collagens
9005-32-7DP, Alginic acid, reaction products with collagens 9007-28-7DP, Chondroitin sulfate, reaction products with collagens 9042-14-2DP, Dextran sulfate, reaction products with collagens 9050-30-0DP, Heparan sulfate, reaction products with collagens 9056-36-4DP, Keratan sulfate, reaction products with collagens 24967-94-0DP, Dermatan sulfate, reaction products with collagens 70226-44-7DP, Heparan, reaction products with collagens
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 62683-29-8, CSF
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mineralized collagen-polysaccharide matrix for **bone** and cartilage repair)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 10 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:185399 HCAPLUS
DOCUMENT NUMBER: 136:229029
TITLE: Method for precipitating mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addition to use thereof
INVENTOR(S): Hofer, Rolf; Pawlak, Michael; Textor, Marcus; Schuermann-Mader, Eveline; Ehrat, Markus; Tosatti, Samuele
PATENT ASSIGNEE(S): Zeptosens A.-G., Switz.
SOURCE: PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020873	A2	20020314	WO 2001-EP10077	20010831
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001089859	A5	20020322	AU 2001-89859	20010831

PRIORITY APPLN. INFO.: CH 2000-1732 A 20000905
WO 2001-EP10077 W 20010831

OTHER SOURCE(S): MARPAT 136:229029

AB The invention relates to a method for pptg. mono or multiple layers of organophosphosphoric acids of general formula (I(A)) Y-B-OPO3 H2 (IA) or organophosphonic acids of general formula (I(B)) Y-B-PO3 H2 (IB) and the salts thereof, wherein B is an alkyl, alkenyl, alkynyl, aryl, aralkyl, hetaryl or hetaryl alkyl radical and Y is hydrogen or a functional group from the hydroxy, carboxy, amino, optionally low-alkyl- substituted mono or dialkylamino series, thiol, or a neg. acid group from the ester, phosphate, phosphonate, sulfate, sulfonate, maleimide, succinimidyl, epoxy, acrylate series. A biol., biochem. or synthetic indicator element can be coupled to B or Y as addn. or substitution reaction, whereby compds. can also be added imparting on the substrate surface a resistance against protein absorption and/or cell adhesion and in the B chain can be, optionally, composed of one or more ethylene oxide groups rather than one or more CH2 groups. According to the invention, said pptn. occurs on the surfaces of the substrates of pure or mixed oxides, nitrides or carbides of metals and semi-conductors. The invention is characterized in that the water-sol. salts composed of formula (IA) or (IB) are used to treat said surfaces, esp. the surfaces of sensor platforms, implants and medical accessory devices. The invention also relates to the use thereof as part of coated sensor platforms, implants and medical accessory devices in addn. to novel organophosphosphoric acids and organophosphonic acids themselves. The optionally substituted compds. of general formula (IA) and (IB), wherein the groups B and Y have the above mentioned designations i.e. optionally substituted alkyl, alkenyl, alkynyl, aryl, aralkyl, hetaryl or hetaryl, are equally called organophosphoric acids or phosphonic acids.

IC ICM C23C022-00

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 14, 17, 29, 63, 64

IT **Dental materials and appliances**
(fillings; method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT **Prosthetic materials and Prosthetics**
(implants, surfaces; method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT Adhesion, biological
Adhesion, physical

Analysis
Animal tissue
Bioindicators (whole organism)
Blood analysis
Calibration
Ceramics
Chelating agents
Combinatorial chemistry
Contact resistance
Culture media
Desorption
Detergents
Diffraction gratings
Egg yolk
Endoscopes
Fermentation
Food analysis
Hydrophilicity
Hydrophobicity
Immobilization
Immunoassay
Indicators
Labels
Lymph
Microsome
Monolayers
Multilayers
Optical fibers
Optical transmission
Pathogen
Pathogenic bacteria
Pharmaceutical analysis
Prisms
Prosthetic materials and Prosthetics
Salmonella
Semiconductor materials
Separation
Soil analysis
Surface reaction
Therapy
Toxicology
Urine analysis
Veterinary medicine
Virus
(method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT Antibodies
Antigens
Bone morphogenetic proteins
DNA
Glycoproteins
Growth factors, animal
Oligonucleotides
Peptides, analysis
RNA
Receptors
RL: ARU (Analytical role, unclassified); DEV (Device component use); PEP

(Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process); USES (Uses)
(phosphoric and phosphonic acid derivs.; method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT **Bone**
(prostheses; method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT **Transforming growth factors**
RL: ARU (Analytical role, unclassified); DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process); USES (Uses)
(.beta.-, phosphoric and phosphonic acid derivs.; method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

IT 107-73-3, Phosphorylcholine **9004-54-0**, Dextran, biological studies 9005-49-6, Heparin, biological studies 9005-64-5, Tween 20 25322-68-3, Polyethylene glycol
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); BIOL (Biological study); PROC (Process)
(method for pptg. mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addn. to use thereof)

L31 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:143320 HCAPLUS
DOCUMENT NUMBER: 136:189420
TITLE: Tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues
INVENTOR(S): Burg, Karen J. L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002022883	A1	20020221	US 2001-879360	20010612

PRIORITY APPLN. INFO.: US 2000-211147P P 20000613

AB The invention provides a biocompatible composite for use in a living subject for purposes of repairing damaged tissues and reconstructing a new tissue. The composite includes a biodegradable or absorbable three-dimensional support construct, a liq. or viscous fluid forming a gel matrix or viscous fluid when delivered to an area of interest in a living subject. The biodegradable construct provides an ideal surface for cell or cell ext. attachment, while the gel matrix or viscous fluid acts as both a carrier material and a separator for maintaining the space between the constructs as well as the structural integrity of the developing issue. Collagen beads were dynamically loaded for 48 h with rat aortic smooth muscle cells, then were mixed and gelled in alginates of 0.5, 1.0, and 2.0% gel strengths following cultivation. Composites were similarly prepd. and 1 mL of the composite was injected s.c. in each exptl. female Lewis rat. Samples were retrieved after 2, 4, and 6 wk and assessed

histol. using a series of cell-specific stains. The in vitro studies demonstrated that the 2.0 percent gel did not allow the high cell viabilities and the low gel strength of 0.5 percent did not maintain the necessary polymeric form. The in vivo work demonstrated that the material can be readily injected and thus is clin. feasible. All composites showed minimal inflammation and minimal fibrous encapsulation, and they appeared to be able to readily conform to irregular defects.

IC ICM A61F002-08
ICS A61F002-12; A61F002-10
NCL 623008000
CC 63-7 (Pharmaceuticals)
IT **Prosthetic materials and Prosthetics**
(composites; tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues)
IT **Bone**
(demineralized; tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues)
IT **Prosthetic materials and Prosthetics**
(implants; tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues)
IT **Growth factors, animal**
Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues)
IT 50-21-5D, Lactic acid, copolymer with lysine and RGD peptide 56-87-1D, Lysine, copolymer with lactic acid and RGD peptide 9000-07-1, Carrageenan 9002-89-5 9003-05-8 9003-11-6, Poly(ethylene oxide)-poly(propylene oxide) 9004-34-6, Cellulose, biological studies 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9007-28-7, Chondroitin sulfate 9012-36-6, Agarose 9012-76-4, Chitosan 24980-41-4, Polycaprolactone 25104-18-1, Polylysine 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4, Polyglycolide 26680-10-4, Polylactide 31621-87-1, Polydioxanone 38000-06-5, Polylysine 156461-57-3, Lactic acid-Lysine copolymer
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tissue engineering composite for purposes of repairing damaged tissues and reconstructing new tissues)

L31 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:72718 HCAPLUS
DOCUMENT NUMBER: 136:123690
TITLE: Methods for stabilizing drugs encapsulated in biodegradable controlled-release polymers
INVENTOR(S): Schwendeman, Steven P.; Zhu, Gaozhong; Bentz, Hanne; Hubbell, Jeffrey A.; Jiang, Wenlei; Shenderova, Anna; Kang, Jichao
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002009493	A1	20020124	US 2000-738961	20001215

PRIORITY APPLN. INFO.: US 1999-170983P P 19991215

AB Methods for reducing or inhibiting the irreversible inactivation of water-sol. drugs in biodegradable polymeric delivery systems which are designed to release such agents over a prolonged period of time, such as PLGA delivery systems are provided. The method comprises prepg. a PLGA delivery systems whose microclimate, i.e., the pores where the active agent resides, uniformly or homogeneously maintain a pH of between 3 and 9, preferably between 4 and 8, more preferably between 5 and 7.5 during biodegrdn. Depending on the size of the delivery system, and the initial bulk permeability of the polymer, this result is achieved by (a) incorporating a water-sol. carrier into the delivery system, (b) incorporating a select basic additive (or antacid) into the delivery system, (c) incorporating both a water sol. carrier and a select basic additive into the delivery system, (d) adding a pore forming mol. for increasing the rate of release of low mol. wt. monomers and oligomers into the delivery system, (e) using a PLGA polymer with reduced glycolide content, i.e. PLGA contg. 100 to 75% lactide and 0 to 25% glycolide (f) using a microencapsulation method that yields a more extensive pore-network, e.g., oil-in-oil emulsion-solvent extn. as opposed to water-in-oil-in water-solvent evapn. method, and (g) combinations thereof. Tissue plasminogen activator (tPA) was successfully encapsulated into PLGA implants. Controlled release systems for local delivery was developed by using hydrogel to control wound healing. A multi-drug controlled release implant with tPA encapsulated was also tested for the intraocular management of proliferative vitroretinopathy. Here, 10% tPA powder was encapsulated as received (2% tPA, 75% arginine, 22% phosphoric acid, and 1% Polysorbate 80) with or without 3% Mg(OH)2 into PLGA milli-cylinders. Arginine-HCl and BSA were added in the release medium to improve the stability of released tPA. With Mg(OH)2 encapsulated, the 1-mo release of tPA was increased from 77.1 to 98.0% and the recovery (released part + active residue) was increased from 82.7 to 100.1%, resp.

IC ICM A61K009-14

NCL 424486000

CC 63-6 (Pharmaceuticals)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(2; methods for stabilizing drugs encapsulated in biodegradable controlled-release polymers)

IT 546-93-0, Magnesium carbonate 1305-62-0, Calcium hydroxide, biological studies 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, biological studies 1339-92-0, Basic aluminum carbonate 3486-35-9, Zinc carbonate 7758-87-4, Calcium phosphate 7779-90-0, Zinc phosphate 9000-01-5, Gum arabic **9004-54-0**, Dextran, biological studies 10361-65-6, Ammonium phosphate 13682-92-3, Dihydroxyaluminum aminoacetate 14987-04-3, Magnesium trisilicate 16482-55-6, Dihydroxyaluminum sodium carbonate 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, biological studies 74978-16-8, Magaldrate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods for stabilizing drugs encapsulated in biodegradable

controlled-release polymers)

IT 143-67-9, Vinblastine sulfate 2068-78-2, Vincristine sulfate **62031-54-3**, Fibroblast growth factor 106096-93-9, Basic Fibroblast growth factor 139639-23-9, Tissue plasminogen activator
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(methods for stabilizing drugs encapsulated in biodegradable controlled-release polymers)

L31 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:906235 HCAPLUS
DOCUMENT NUMBER: 136:25166
TITLE: Method for composite cell-based implants using mineral or polymeric microcarriers
INVENTOR(S): Frondoza, Carmelita G.; Hungerford, David S.; Shikani, Alan H.; Domb, Abraham J.; Fink, David J.; Bloom, Leonard
PATENT ASSIGNEE(S): Chondros, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U. S. Ser. No. 825,632.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001051834	A1	20011213	US 2001-922909	20010806
US 2001014475	A1	20010816	US 2001-825632	20010404
US 2002012705	A1	20020131	US 2001-929697	20010814
US 6514522	B2	20030204		
US 2002123142	A1	20020905	US 2002-39718	20020103

PRIORITY APPLN. INFO.:
US 1998-81016P P 19980408
US 1998-104842P P 19981020
US 1999-275319 A2 19990324
US 2000-712662 A2 20001114
US 2001-825632 A2 20010404
US 1999-165608P P 19991115
US 2000-228855P P 20000829

AB This invention is a method for the implantation of a combination of cells or cell-microcarrier aggregates wherein one component comprises a solid implantable construct and a second component comprises an injectable formulation. For example, in one embodiment, the solid implant may be first implanted to fill the majority of the cavity receiving the implant, and then cells or cell-microcarrier aggregates in an injectable format, with or without the addn. of gelling materials to promote rapid gelling in situ, may be injected into spaces surrounding the solid implant in order to secure the solid implant in the site and/or to promote rapid adherence and/or integration of the solid implant to surrounding tissues. Also contemplated in this embodiment is that the cellular compn. of the injectable component may differ from that of the solid component. For example, the solid implant may result from the culturing of chondrocytes on microcarriers or scaffolds, e.g., calcium carbonate, calcium phosphate or calcium sulfate, biopolymers, or synthetic polymers such as polylactic acid, polyglycolic or their copolymers, thereby resulting in an implant having cartilage-like properties, whereas the injectable cells or

aggregates may result from the culturing of stem cells, resulting thereby in cells capable of producing cells of a chondrogenic, fibroblastic, myoblastic or **osteoblastic** phenotype. In this example, cells in the injectable aggregates may promote the fixation to or rapid integration of the solid cartilage implant into surrounding cartilage, connective tissue, muscle or **bone**, resp. A method of treating a skin lesion or nose or ear defects comprises filling the lesion or defect with a solid cell-contg. implant along with an injectable cell-contg. formulation.

IC ICM A61F002-02
ICS A61F002-28
NCL 623023720
CC 63-7 (Pharmaceuticals)
IT Animal tissue culture
Cell aggregation
Chondrocyte
Fibroblast
Gelation
Hydrogels
Myoblast
Osteoblast
Polymerization
(composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT Antibodies
Bone morphogenetic proteins
Cytokines
Growth factors, animal
Integrins
Interleukins
Lymphotoxin
Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluid medium for injection contg.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **Prosthetic materials and Prosthetics**
(implants; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **Bone**
Cartilage
(particles, microcarriers; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **Bone** marrow
(stroma, stem cells derived from; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT Joint, anatomical
(temporal-**mandibular** or intervertebral, fibroblasts; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **62031-54-3**, Fibroblast growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluid medium for injection contg.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT 471-34-1, Calcium carbonate, biological studies 1398-61-4, Chitin

7778-18-9, Calcium sulfate 9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Poly(acrylic acid) **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-35-0, Calcium alginate 9012-36-6, Agarose 9012-76-4, Chitosan 10103-46-5, Calcium phosphate 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid-lactic acid copolymer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microcarriers or scaffolds; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

L31 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:850951 HCAPLUS
DOCUMENT NUMBER: 136:11086
TITLE: Methods and compositions for promoting angiogenesis using monocytes
INVENTOR(S): Pawliuk, Robert; Leboulch, Philippe
PATENT ASSIGNEE(S): Genetix Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001087314	A1	20011122	WO 2001-US16026	20010518
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002034501	A1	20020321	US 2001-860657	20010518

PRIORITY APPLN. INFO.: US 2000-205063P P 20000518

AB Novel compns. and methods for treating myocardial and peripheral ischemia are disclosed which employ monocytes to provide localized, controlled doses of secreted therapeutic proteins to selected tissue areas. These proteins can be naturally produced by monocytes, or produced following genetic transduction of monocytes or their progenitor cells with appropriate expression vectors.

IC ICM A61K035-14
ICS A61K038-19; A61P009-10

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 3, 15

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2; methods and compns. for promoting angiogenesis using monocytes)

IT **Bone morphogenetic proteins**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4; methods and compns. for promoting angiogenesis using monocytes)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; methods and compns. for promoting angiogenesis using monocytes)

IT **Platelet-derived growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(B; methods and compns. for promoting angiogenesis using monocytes)

IT Macrophage inflammatory protein 1.alpha.
Macrophage inflammatory protein 1.beta.
Monocyte chemoattractant protein-1
Osteopontin
RANTES (chemokine)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for promoting angiogenesis using monocytes)

IT Blood
Bone marrow
(monocyte purifn. from; methods and compns. for promoting angiogenesis using monocytes)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; methods and compns. for promoting angiogenesis using monocytes)

IT 11096-26-7, Erythropoietin 65154-06-5, Paf **67763-96-6**, Igf-1 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 123626-67-5, Endothelin-1 127464-60-2, Vascular endothelial growth factor A 186270-49-5, Angiopoietin 1 188417-84-7, Vascular endothelial growth factor C 192662-83-2, Vascular endothelial growth factor B 193363-12-1, Vascular endothelial growth factor D 194368-66-6, Angiopoietin 2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for promoting angiogenesis using monocytes)

IT **9015-73-0**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(methods and compns. for promoting angiogenesis using monocytes)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:792224 HCAPLUS
DOCUMENT NUMBER: 135:335182
TITLE: Collagen-polysaccharide matrix for treatment of **bone** tumors

INVENTOR(S): Heidaran, Mohammad; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 5,972,385.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6309670	B1	20011030	US 1999-324792	19990603
US 5866165	A	19990202	US 1997-783650	19970115
US 5972385	A	19991026	US 1998-7731	19980115

PRIORITY APPLN. INFO.: US 1997-783650 A2 19970115
US 1998-7731 A2 19980115

AB A method of treatment for **bone** tumors comprising administering a matrix comprising collagen, a polysaccharide and a differentiation factor is provided. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to collagen. For example, the collagen/hyaluronic acid/TGF-.beta. combination inhibited growth of the **osteosarcoma** cell line SK-ES-1 more potently than a combination of TGF-.beta. and collagen in a monolayer culture.

IC ICM A61K009-10
ICS A61K047-42; A61K047-36
NCL 424486000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 2
ST collagen polysaccharide matrix differentiation factor antitumor **bone**
IT Antitumor agents
(Ewing's sarcoma; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(**bone**, metastasis; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(**bone**; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(carcinoma, **bone**; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Drug delivery systems
Oxidizing agents
(collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Collagens, biological studies
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix contg. differentiation factors for

treatment of **bone** tumors)
IT **Bone**, neoplasm
(inhibitors; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT **Bone**, neoplasm
(metastasis, inhibitors; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Nervous system
(neuroectoderm, neoplasm, inhibitors; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(neuroectoderm; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT **Bone**, neoplasm
(**osteosarcoma**, inhibitors; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(**osteosarcoma**; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Freeze drying
(prepn. of collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Antitumor agents
(sarcoma; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Cell differentiation
(stimulation of; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Drug interactions
(synergistic; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT Collagens, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(type I; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT 7790-28-5, Sodium periodate
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid 9007-28-7, Chondroitin sulfate 9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24967-94-0, Dermatan sulfate 70226-44-7, Heparan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix contg. differentiation factors for treatment of **bone** tumors)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 16 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:780648 HCAPLUS

DOCUMENT NUMBER: 135:335147
TITLE: Polymer-based injectable sustained release pharmaceutical compositions for peptide and protein drugs
INVENTOR(S): Lee, Hee-yong; Lee, Hye-suk; Kim, Jung-soo; Kim, Sang-beom; Lee, Ji-suk; Choi, Ho-il; Chang, Seung-gu
PATENT ASSIGNEE(S): Peptron Inc., S. Korea
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001078687	A1	20011025	WO 2001-KR462	20010322
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1187602	A1	20020320	EP 2001-917893	20010322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2003026844	A1	20030206	US 2002-18870	20020418

PRIORITY APPLN. INFO.:
KR 2000-20484 A 20000418
KR 2000-49344 A 20000824
WO 2001-KR462 W 20010322

AB Controlled and sustained release injectable pharmaceutical compns. for a biopharmaceutical, such as peptides and proteins are described. Processes for prepn. of an injectable sustained release compn. comprises (i) a step of prepg. biodegradable porous microspheres having accessible ionic functional groups, (ii) a step of encapsulating a biopharmaceutical into the microspheres through ionic interaction by suspending or equilibrating the microspheres in a soln. contg. the biopharmaceutical, and (iii) a step of recovering and freeze-drying the biopharmaceutical-incorporated microspheres. For example, microspheres were prepd. by water/oil/water double emulsion solvent evapn. method using a hydrophilic 50:50 PLGA polymer (RG 502H), which contains free carboxy end groups. Deionized water (800 mL) was added to 1 g of PLGA polymer dissolved in 2 mL of methylene chloride and emulsified by sonication for 30 s using a probe type ultrasonic generator. This primary emulsion was dispersed into 200 mL of deionized water contg. 0.5% polyvinyl alc. (wt./vol.) in a vessel which connected to a const. temp. controller and mixed well by stirring for 15 min at 2500 rpm, 25.degree. using a mixer. After mixing for another 15 min at 1500 rpm, 25.degree., temp. of continuous phase was increased to 40.degree. to evap. methylene chloride. After 1 h stirring at 40.degree., 1500 rpm, temp. was decreased to 25.degree.. The hardened microspheres were collected by centrifugation and washed twice with 200 mL of deionized water, and then freeze-dried. The microspheres obtained were used for incorporation of protein drugs, i.e., ovalbumin, bovine serum albumin, human growth hormone, RNase A, or lysozyme through ionic

interaction by simply soaking and equilibrating the microspheres into a buffer soln. having an appropriate concn. of protein.

IC ICM A61K009-22

CC 63-6 (Pharmaceuticals)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cartilage-inducing factor; prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**osteogenic** growth factors; prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

IT Annexins
Bone morphogenetic proteins
Caseins, biological studies
Collagens, biological studies
Fibrinogens
Hemoglobins
Interferons
Interleukin 1
Interleukins
Lymphotoxin
Ovalbumin
Platelet-derived growth factors
Polyanhydrides
Polycarbonates, biological studies
Polymer blends
Polysaccharides, biological studies
Proteins, general, biological studies
Transferrins
Transforming growth factors
Tumor necrosis factors
Zeins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

IT 121-54-0, Benzethonium chloride 151-21-3, Sodium lauryl sulfate, biological studies 577-11-7, Docusate sodium 1393-25-5, Secretin 1398-61-4, Chitin 1402-38-6, Oncostatin 8044-71-1, Cetrimide 9001-25-6, Blood-coagulation factor VII 9001-28-9, Factor IX 9001-63-2, Lysozyme 9002-01-1, Streptokinase 9002-60-2, Adrenocorticotrophic hormone, biological studies 9002-61-3, Human chorionic gonadotropin 9002-67-9, Luteinizing hormone 9002-68-0, Follicle stimulating hormone 9002-69-1, Relaxin 9002-71-5, Thyroid stimulating hormone 9002-72-6, Growth hormone 9002-89-5, Polyvinyl alcohol 9004-10-8, Insulin, biological studies 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 9007-27-6, Chondroitin 9007-92-5, Glucagon, biological studies 9011-97-6, Cholecystokinin 9012-76-4, Chitosan 9015-71-8, Corticotropin releasing factor 9034-39-3, Growth hormone releasing factor 9035-68-1, Proinsulin 9039-53-6, Urokinase 9041-92-3, .alpha.1-Antitrypsin 9054-89-1, Superoxide dismutase 9056-36-4, Keratan sulfate 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin 15802-18-3D, Cyanoacrylic acid, esters, polymers

24980-41-4, Polycaprolactone 25104-18-1, Poly(L-lysine) 25248-42-4, Polycaprolactone 25868-59-1 25931-47-9 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4, Polyglycolide 26680-10-4, Polylactide 26780-50-7, Poly(lactide-co-glycolide) 31621-87-1, Polydioxanone 34346-01-5, Resomer RG 502H 37221-79-7, Vasoactive intestinal polypeptide 38000-06-5, Poly(L-lysine) 52906-92-0, Motilin 57285-09-3, Inhibin 59392-49-3, Gastric inhibitory peptide 59763-91-6, Pancreatic polypeptide **61912-98-9**, Insulin-like growth factor **62229-50-9**, Epidermal growth factor 62683-29-8, Colony stimulating factor **67763-96-6**, Somatomedin C 77272-10-7, Macrocortin 80043-53-4, Gastrin releasing peptide 82657-92-9, Prourokinase 83652-28-2, Calcitonin gene-related peptide 85637-73-6, Atrial natriuretic factor 113189-02-9, Antihemophilic factor 139639-23-9, Tissue plasminogen activator
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:757812 HCAPLUS
DOCUMENT NUMBER: 135:308889
TITLE: Crosslinked polysaccharide drug carrier
INVENTOR(S): Spiro, Robert C.; Thompson, Andrea Y.; Liu, Linshu
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 887,994, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6303585	B1	20011016	US 1998-110381	19980701
US 2003012765	A1	20030116	US 2001-954855	20010917

PRIORITY APPLN. INFO.: US 1997-887994 B2 19970703
US 1998-110381 A1 19980701

AB A carrier and a method for prepg. it are provided for use in the delivery of therapeutic agents. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent oxime linkages with a second polysaccharide and each of the first and second polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratan sulfate, heparan, heparan sulfate and alginate. A hyaluronate amine deriv. was prepd. by treating hyaluronic acid with EDC and ethylenediamine.

IC ICM C08B037-00
ICS A61K031-715
NCL 514054000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 33
IT **Bone formation**
Crosslinking
Dissolution rate

(crosslinked polysaccharide drug carrier)
IT **Growth factors, animal**
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinked polysaccharide drug carrier)
IT **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid
9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate
9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4,
Keratan sulfate 24967-94-0, Dermatan sulfate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinked polysaccharide drug carrier)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:661596 HCAPLUS
DOCUMENT NUMBER: 135:237110
TITLE: Cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof
INVENTOR(S): Zhang, Ke; Linh, Cam; Nakayama, Naoki
PATENT ASSIGNEE(S): Amgen, Inc., USA
SOURCE: PCT Int. Appl., 167 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001064885	A1	20010907	WO 2001-US6891	20010302
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1266000	A1	20021218	EP 2001-913290	20010302
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-186462P P 20000302
WO 2001-US6891 W 20010302

AB The invention provides protein and cDNA sequences for novel human and mouse chordin-like-2 protein CHL2, which has sequence similarity to chordin known as the **bone** morphogenetic protein (BMP) inhibitor. The invention also provides selective binding agents, vectors, host cells, and methods for producing CHL2 polyproteins. The tissue distribution pattern of the mRNA shows that CHL2 is involved in mouse articular chondrocytes, sternum, placenta, uterus, colon, and small intestine. CHL2 directly interacts with BMPs, and its inhibitory activity is demonstrated in CHL2 gene transfected cells, Xenopus embryo, and in transgenic mice. The murine CHL2 gene is mapped to chromosome 7 centromere. The invention further provides pharmaceutical compns. and methods for the diagnosis,

treatment, amelioration, and/or prevention of diseases, disorders, and conditions assocd. with CHL2 polyproteins.

IC ICM C12N015-12
ICS C07K014-47; C07K014-705; C12N015-62; C07K016-18; C07K016-28; G01N033-53; A61K038-17; C12Q001-68

CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 1, 3, 63

ST chordin like 2 protein CHL2 cDNA sequence human mouse; **bone** morphogenetic protein inhibition CHL2 gene diagnosis therapy

IT **Bone morphogenetic proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(2, inhibition by chordin-like-2 protein; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Bone morphogenetic proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(4, inhibition by chordin-like-2 protein; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Bone morphogenetic proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(5, inhibition by chordin-like-2 protein; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Bone morphogenetic proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(6, 14, inhibition by chordin-like-2 protein; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Bone morphogenetic proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(6, inhibition by chordin-like-2 protein; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Growth factors, animal**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chordin; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT **Bone**
(sternum, CHL2 mRNA expression in; cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

IT 57-55-6D, Propylene glycol, conjugates with chordin-like-2 protein
9002-89-5D, Polyvinyl alcohol, conjugates with chordin-like-2 protein
9003-11-6D, Ethylene oxide propylene oxide copolymer, conjugates with chordin-like-2 protein 9004-34-6D, Cellulose, conjugates with chordin-like-2 protein, biological studies **9004-54-0D**, Dextran, conjugates with chordin-like-2 protein, biological studies 9004-74-4D, Monomethoxy polyethylene glycol, conjugates with chordin-like-2 protein
9065-38-7D, conjugates with chordin-like-2 protein 25322-68-3D, Polyethylene glycol, conjugates with chordin-like-2 protein
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cloning and characterization of chordin-like-2 protein genes from human and mouse, diagnostic and therapeutic use thereof)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:618469 HCAPLUS
DOCUMENT NUMBER: 135:170821
TITLE: **Osteogenic** devices and methods of use thereof for repair of endochondral **bone** and **osteochondral** and chondral defects
INVENTOR(S): Rueger, David C.; Tucker, Marjorie A.; Chang, An-Cheng
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 59 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001016646	A1	20010823	US 1998-45331	19980320

PRIORITY APPLN. INFO.: US 1998-45331 19980320

AB Disclosed herein are improved **osteogenic** devices and methods of use thereof for repair of **bone** and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less **osteogenic** protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to: crit. size defects, non-crit. size defects, non-union fractures, fractures, **osteochondral** defects, subchondral defects, and defects resulting from degenerative diseases such as **osteochondritis** dissecans.

IC ICM C07K001-00
ICS C07K014-00; C07K017-00; A01N025-34; G01N033-53
NCL 530840000
CC 63-7 (Pharmaceuticals)
ST **osteogenic** device endochondral **bone** defect repair
IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(10; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(11; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(12; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(15; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(16; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(3; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(4; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(5; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(60A; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(6; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(7; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(9; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(DPP; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU

(Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF10; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF11; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF1; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF3; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF5; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF6; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF7; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF8; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF9; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Vgl; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Vgr; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Cartilage
(articular; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Drug delivery systems
(carriers; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Medical goods
(containers; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone**
(demineralized; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Cartilage
(formation; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone**, disease
(fracture; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Containers
(medical; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT **Bone**, disease
Cartilage
(**osteochondritis** dissecans; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Binders
Bone formation
Protein sequences
Wetting agents
cDNA sequences
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Fibrins
Petrolatum
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Apatite-group minerals
Collagens, biological studies
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)
IT Fibrinogens
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone**

and **osteochondral** and chondral defects)

IT **Growth factors, animal**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** protein 2; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT **Growth factors, animal**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** protein 3; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT Fats and Glyceridic oils, biological studies
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sesame; **osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT 69-65-8, mannitol 9004-32-4, carboxymethylcellulose 9004-34-6D, cellulose, alkyl derivs., biological studies **9004-54-0**, dextran, biological studies 9004-62-0, Hydroxyethylcellulose 9004-65-3, hydroxypropylmethylcellulose 9004-67-5, methylcellulose 9032-42-2, methylhydroxyethylcellulose
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT 1306-06-5, hydroxyapatite 7758-87-4, tricalcium phosphate
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

IT 9002-04-4, thrombin
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices for repair of endochondral **bone** and **osteochondral** and chondral defects)

L31 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:581931 HCAPLUS
DOCUMENT NUMBER: 135:157661
TITLE: Extraction of growth factors from tissue
INVENTOR(S): Donda, Russell S.; Wironen, John F.; Seid, Christopher
PATENT ASSIGNEE(S): Regeneration Technologies, Inc., USA
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001057082	A2	20010809	WO 2001-US3474	20010202
WO 2001057082	A3	20020221		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2001041792	A1	20011115	US 2001-776619	20010202

PRIORITY APPLN. INFO.:

US 2000-180067P	P	20000203
US 2000-200842P	P	20000501
US 2000-215912P	P	20000703

AB Diclosed are novel methods of obtaining **osteogenic** and other growth factor compns. from alternative nonbone sources such as tissue or **bone** marrow, and methods of using the same. Also disclosed are implants infused with growth factors obtained from the methods. An example is given of extn. of growth factors from platelets.

IC ICM C07K014-475

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 2

IT **Prosthetic materials and Prosthetics**
(bioactive glass; extn. of growth factors from tissue)

IT **Prosthetic materials and Prosthetics**
(ceramics; extn. of growth factors from tissue)

IT Adipose tissue
Animal tissue
Bone
Bone marrow
Cadaver
Cartilage
Connective tissue
Muscle
Platelet (blood)
Skin
Solubilizers
(extn. of growth factors from tissue)

IT **Platelet-derived growth factors**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(extn. of growth factors from tissue)

IT **Growth factors, animal**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(extn. of growth factors from tissue)

IT **Prosthetic materials and Prosthetics**
(implants; extn. of growth factors from tissue)

IT Angiogenic factors
Bone morphogenetic proteins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or

recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(platelet-derived; extn. of growth factors from tissue)

IT 50-01-1, Guanidine hydrochloride 56-81-5, Glycerol, processes 57-13-6, Urea, processes 151-21-3, Sodium dodecyl sulfate, processes 9002-93-1, Triton x100 9004-34-6, Cellulose, processes **9004-54-0**, Dextran, processes 9004-61-9, Hyaluronic acid 9005-80-5, Inulin 9012-36-6, Agarose 9037-22-3, Amylopectin 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 106392-12-5, pluronic F127
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(extn. of growth factors from tissue)

IT **62229-50-9P**, egf
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(platelet-derived; extn. of growth factors from tissue)

L31 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:489907 HCAPLUS
DOCUMENT NUMBER: 135:81959
TITLE: Gene transfer to intervertebral disc cells, and use in the treatment of degenerative disk disorders, and animal model for degenerative disk disease
INVENTOR(S): Kang, James D.; Evans, Christopher H.; Nishida, Kotaro; Robbins, Paul D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001006948	A1	20010705	US 1998-199978	19981125

PRIORITY APPLN. INFO.: US 1998-199978 19981125

AB Methods for transferring a gene to an intervertebral disk are disclosed. The methods find application in the treatment of patients for degenerative disk disorders, by use of a gene encoding a product that imparts a therapeutic and/or prophylactic benefit. The methods also find application in the establishment of an animal model for the study of degenerative disk disease. A genetically modified intervertebral disk cell is also disclosed.

IC ICM A61K048-00
NCL 514044000
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 14

IT **Bone morphogenetic proteins**
Growth factors, animal
Interleukin 1 receptor antagonist
Transforming growth factors
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-; gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 86102-31-0, Tissue inhibitor of metalloproteinase 96282-35-8 105844-41-5, Plasminogen activator inhibitor
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **9015-73-0** 10103-46-5, Calcium phosphate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

L31 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:472523 HCAPLUS
DOCUMENT NUMBER: 135:66255
TITLE: Liquid composition of a biodegradable block copolymer for drug delivery system
INVENTOR(S): Seo, Min-hyo; Choi, In-ja
PATENT ASSIGNEE(S): Samyang Corp., S. Korea
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001045742	A1	20010628	WO 2000-KR1508	20001221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1244471	A1	20021002	EP 2000-989005	20001221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003082234	A1	20030501	US 2002-169012	20020622

PRIORITY APPLN. INFO.: KR 1999-60349 A 19991222
WO 2000-KR1508 W 20001221

AB The present invention relates to a liq. polymeric compn. capable of forming a physiol. active substance-contg. implant when it is injected into a living body and a method of prepn. The compn. comprises a water-sol. biocompatible liq. polyethylene glycol deriv., a biodegradable block copolymer which is insol. in water but sol. in the water-sol. biocompatible liq. polyethylene glycol deriv. and a physiol. active substance. Thus, a triblock copolymer was prepd. from lactide-1,4-dioxanone and PEG. Piroxicam 150, the above biodegradable block copolymer 400, diacetyl polyethylene glycol 420, and gelatin 30 mg were dissolved in a 50% aq. HOAc soln. and the drug-contg. liq. polymeric compn. was filtered and the org. solvent was removed.

IC ICM A61K047-30

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 37

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT **Platelet-derived growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT 50-70-4, Sorbitol, biological studies 50-76-0, Actinomycin-D 50-78-2, Aspirin 50-99-7, Glucose, biological studies 51-21-8, 5-Fluorouracil 53-86-1, Indomethacin 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 59-01-8, Kanamycin 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 60-54-8, Tetracycline 63-42-3, Lactose 69-53-4, Ampicillin 69-65-8, Mannitol 87-79-6, Sorbose 87-99-0, Xylitol 99-20-7, Trehalose 103-90-2, Acetaminophen 114-07-8, Erythromycin 151-21-3, Sodium dodecylsulfate, biological studies 471-34-1, Calcium carbonate, biological studies 557-34-6, Zinc acetate 564-25-0, Doxycycline 1066-17-7, colistin 1309-42-8, Magnesium hydroxide 1314-13-2, Zinc oxide, biological studies 1403-66-3, Gentamycin 1404-00-8, Mitomycin 1404-04-2, Neomycin 1404-90-6, Vancomycin 1405-87-4, bacitracin 1406-05-9, Penicillin 1407-47-2, angiotensin 3486-35-9, Zinc carbonate 5104-49-4, Flurbiprofen 6990-06-3, Fusidic acid 7446-70-0, Aluminum chloride, biological studies 7542-37-2, Paromomycin 7646-85-7, Zinc chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 9001-63-2, Lysozyme 9002-72-6, Somatotropin 9003-39-8, Polyvinylpyrrolidone 9004-10-8, insulin, biological studies 9004-32-4, Sodium carboxymethyl cellulose **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9007-12-9, calcitonin 9007-92-5, glucagon, biological studies 9012-76-4, Chitosan 9034-39-3, growth hormone releasing factor 9034-40-6, LHRH 9061-61-4, nerve growth factor 10043-52-4, Calcium chloride, biological studies 10118-90-8, Minocycline 11056-06-7, Bleomycin 11096-26-7, erythropoietin 11111-12-9, Cephalosporin 12619-70-4, Cyclodextrin 13614-98-7, Minocycline hydrochloride 15307-79-6, Diclofenac sodium 15307-86-5, Diclofenac 15663-27-1, Cisplatin 15687-27-1, Ibuprofen 16039-53-5, Zinc lactate 20830-81-3, Daunorubicin 21645-51-2, Aluminum hydroxide, biological studies 22071-15-4, Ketoprofen 22204-53-1, Naproxen 23155-02-4, Phosphomycin 23214-92-8, Doxorubicin 24305-27-9, thyrotropin releasing hormone 25316-40-9, Adriamycin 25322-68-3D, alkyl ethers 25496-72-4, Glyceryl monooleate 29679-58-1, Fenoprofen 31566-31-1, Glyceryl monostearate 32986-56-4, Tobramycin 33069-62-4, Paclitaxel 34493-98-6, Dibekacin

36322-90-4, Piroxicam 37517-28-5, Amikacin 40828-46-4, Suprofen 41575-94-4, Carboplatin 51110-01-1, somatostatin 52093-21-7, Micronomicin 53994-73-3, Cephaclor 58957-92-9, Idarubicin 59804-37-4, Tenoxicam 59995-64-1, Thienamycin 60118-07-2, endorphin **62229-50-9**, EGF 63527-52-6 64221-86-9, Imipenem 68767-14-6, Loxoprofen 74011-58-8, Enoxacin 81627-83-0, M-CSF 82419-36-1, Ofloxacin 85721-33-1, Ciprofloxacin 86090-08-6, angiostatin 100986-85-4, Levofloxacin 106392-12-5, Poloxamer 114977-28-5, Taxotere 126467-48-9, porcine growth hormone 143011-72-7, GCSF 187888-07-9, endostatin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:435269 HCAPLUS
DOCUMENT NUMBER: 135:56492
TITLE: Homologs of the **bone** morphogenetic protein ligand chordin identified by sequence homology and their uses
INVENTOR(S): Nakayama, Naoki; Wen, Duanzhi; Han, Chun-ya; He, Ching; Yu, Dongyin
PATENT ASSIGNEE(S): Amgen, Inc., USA
SOURCE: PCT Int. Appl., 199 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042465	A2	20010614	WO 2000-US32906	20001204
WO 2001042465	A3	20020124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1238075	A2	20020911	EP 2000-980962	20001204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.: US 1999-169494P P 19991207
US 2000-724915 A 20001128
WO 2000-US32906 W 20001204

AB The present invention provides Chordin-Like (CHL) polypeptides and nucleic acid mols. encoding the same. The invention also provides selective binding agents, vectors, host cells, and methods for producing CHL polypeptides. The invention further provides pharmaceutical compns. and methods for the diagnosis, treatment, amelioration, and/or prevention of diseases, disorders, and conditions assocd. with CHL polypeptides. The mRNA for the protein is widely distributed in mouse and human tissues.

Translation of the mRNA for the mouse CHL protein in Xenopus oocytes indicated that it could antagonize the endogenous ventralizing factor about as efficiently as chordin.

IC C12N015-12; C07K014-475; G01N033-53; C07K016-22; C12N005-12; A61K038-18; C12N015-86; C12N015-62; A01K067-027

CC 2-10 (Mammalian Hormones)

ST chordin like protein gene discovery human mouse sequence; **bone** morphogenetic protein antagonist chordin homolog gene discovery

IT **Bone morphogenetic proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(4, CHL as ligand for; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Proteins, specific or class
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(CHL (chordin-like); homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(G, fusion products, with chordin-like proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Nerve
(Purkinje cell, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-idiotypic, to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Gene, animal
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cDNA, for chordin-like protein; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Brain
(cerebral cortex, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chimeric, to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Intestine
(colon, mucosa, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Polyoxyalkylenes, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(conjugates with chordin-like proteins; homologs of **bone**

morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT mRNA
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(for chordin-like proteins, tissue distribution of; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Drug screening
(for effectors of CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Immunoglobulins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments, to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Genetic methods
(gene discovery; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Molecular cloning
(homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Chromosome
(human X, Xq22.1-23, gene for CHL protein mapping to; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(humanized, to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Adipose tissue
Bone marrow
Brain
Development, mammalian postnatal
Heart
Kidney
Liver
Lung
Lymph node
Muscle
Ovary
Prostate gland
Spleen
Testis
Thymus gland
(mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Chromosome
(mouse X, gene for CHL protein on; homologs of **bone**

morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Genetic mapping
(of gene for CHL protein of mouse and human; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Brain
(olfactory bulb, external plexiform layer, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT **Bone**, disease
(**osteopetrosis**, treatment of; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Alcohols, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(polyhydric, ethoxylated, conjugates with chordin-like proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Mesenchyme
(skin, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Intestine
(small, mRNA for chordin-like protein in; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(to CHL proteins; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT **Osteoporosis**
(treatment of; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 344972-07-2, Protein CHL (mouse clone 1-2) 344972-08-3 344972-09-4 344972-10-7 344972-11-8 344972-13-0 344972-17-4 344972-18-5
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(amino acid sequence; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 344972-12-9 344972-14-1 344972-15-2 344972-16-3 344972-19-6 344972-20-9 344972-21-0
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 57-55-6D, Propylene glycol, conjugates with chordin-like proteins 9002-89-5D, Polyvinyl alcohol, conjugates with chordin-like proteins 9003-11-6D, Propylene oxide ethylene oxide copolymer, conjugates with chordin-like proteins 9004-34-6D, Cellulose, conjugates with chordin-like proteins, biological studies **9004-54-0D**, Dextran, conjugates with chordin-like proteins, biological studies 9004-74-4D, Monomethoxypolyethylene glycol, conjugates with chordin-like proteins 25322-68-3D, Polyethylene glycol, conjugates with chordin-like proteins 213329-63-6D, conjugates with chordin-like proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 344822-37-3 344822-38-4 344822-39-5 344822-40-8
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; homologs of **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 344972-25-4 344972-26-5 344972-27-6 344972-28-7 344972-29-8
344972-30-1 344972-31-2 344972-32-3 344972-33-4 344972-34-5
344972-35-6 344972-36-7 344972-37-8
RL: PRP (Properties)
(unclaimed nucleotide sequence; homologs of the **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 217945-18-1, Chordin (mouse gene Chrd) 217945-19-2 344972-24-3
344972-38-9 344972-39-0 344972-40-3 344972-41-4
RL: PRP (Properties)
(unclaimed protein sequence; homologs of the **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

IT 191936-91-1 322644-80-4
RL: PRP (Properties)
(unclaimed sequence; homologs of the **bone** morphogenetic protein ligand chordin identified by sequence homol. and their uses)

L31 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:416980 HCAPLUS
DOCUMENT NUMBER: 135:15095
TITLE: In situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy
INVENTOR(S): Pierce, Glenn; Chandler, Lois Ann
PATENT ASSIGNEE(S): Selective Genetics, Inc., USA
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040272	A2	20010607	WO 2000-US32754	20001130
WO 2001040272	A3	20020117		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2001044413	A1	20011122	US 2000-729644	20001130

PRIORITY APPLN. INFO.: US 1999-168470P P 19991201
AB The present invention relates to a method of in vivo, sustained gene

therapy wherein one or more in situ bioreactors (or neo-organoids) express systematically available bioactive agents. One method involves implanting or placing into a tissue site a biocompatible substance capable of cellular ingrowth (e.g., device, matrix, semi-permeable membrane with a matrix or liq. interior, etc.). and systemic delivery of a bioactive factor. Also provided are compns., devices, and kits comprising the same. In various embodiments the biocompatible substance comprises a matrix and at least one nucleic acid mol. encoding a bioactive agent. In other embodiments bioreactors are provided wherein a first gene that encodes a growth factor is present and a second gene encoding a bioactive agent is present during manuf. or provided to the bioreactor following manuf. or implantation.

IC ICM C07K014-00

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 9, 63

IT **Platelet-derived growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PDGF-B, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT Angiogenic factors
Antisense oligonucleotides
Bone morphogenetic proteins
Cell adhesion molecules
Chemotactic factors
Cytokines
Hepatocyte growth factor
Macrophage migration inhibitory factor
Ribozymes
Transforming growth factors
p53 (protein)
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Prosthetic materials and Prosthetics**
(bioactive glass, as biocompatible substance; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Prosthetic materials and Prosthetics**
(ceramics, alumina, Bioceram, as biocompatible substance; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.1-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.2-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.3-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9012-76-4, chitosan
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(as biocompatible substance (biol. matrix); in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **61912-98-9P**, IGF **62031-54-3P**, FGF **62229-50-9P**, EGF 62683-29-8P, Colony-stimulating factor 127464-60-2P, Vascular endothelial growth factor 250740-90-0P, Angiopoietin
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

L31 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:50530 HCAPLUS
DOCUMENT NUMBER: 134:105921
TITLE: Human naturally secreted extracellular matrix-coated device
INVENTOR(S): Naughton, Gail K.; Zeltinger, Joan
PATENT ASSIGNEE(S): Advanced Tissue Sciences, Inc., USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001003750	A1	20010118	WO 2000-US18461	20000706
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1196206	A1	20020417	EP 2000-947054	20000706
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-350386 A 19990709
WO 2000-US18461 W 20000706

AB The present invention discloses compns. comprising a naturally secreted human extracellular matrix and methods for the use thereof. More particularly, the present invention provides compns. and methods for the repair of skin defects using natural human extracellular matrix by

injection. The present invention also provides prosthetic devices which are coated or sealed with a compn. comprising a naturally secreted extracellular matrix and methods for the use thereof. Fibroblast cells were cultured on a three-dimensional framework and in monolayer tissue culture dishes. The amt. of collagen synthesized per cell in three-dimensional frame work was 26-116 ng/106 as compared with 6.5-16 ng/106/day for monolayer cultures.

IC ICM A61L027-36
ICS A61L027-34

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38

IT **Bone** marrow
Chondrocyte
Epithelium
Extracellular matrix
Fibroblast
Leukocyte
Lubricants
Macrophage
Mast cell
Monocyte
Sponge (Porifera)
Transplant and Transplantation
(human naturally secreted extracellular matrix-coated device)

IT **Growth factors, animal**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(human naturally secreted extracellular matrix-coated device)

IT **Prosthetic materials and Prosthetics**
(implants, vascular; human naturally secreted extracellular matrix-coated device)

IT **Prosthetic materials and Prosthetics**
(implants; human naturally secreted extracellular matrix-coated device)

IT 97-90-5, Ethylene glycol dimethacrylate 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-70-0, Nitrocellulose 9005-32-7, Alginic acid 9011-14-7, Polymethylmethacrylate 9012-76-4, Chitosan 9016-00-6, Poly[oxy(dimethylsilylene)] 24980-41-4, Poly(.epsilon.-caprolactone 25038-59-9, Polyethyleneterephthalate, biological studies 25189-52-0, Poly(.gamma.-ethyl glutamate 25248-42-4, Poly[oxy(1-oxo-1,6-hexanediyl)] 25249-16-5, Poly 2-hydroxyethyl methacrylate 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26063-00-3, Poly(.beta.-hydroxybutyrate 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 26780-50-7, Polyglycolide-lactide 31621-87-1, Polydioxanone 33410-59-2, Poly HEMA
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(human naturally secreted extracellular matrix-coated device)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 26 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:900497 HCAPLUS
DOCUMENT NUMBER: 134:61577

TITLE: Biologically active material based on an insolubilized dextran derivative and a growth factor
INVENTOR(S): Blanchat, Cinderella; Logeart-avramoglou, Delphine; Petite, Herve; Meunier, Alain; Chaubet, Frederic; Jozefonvicz, Jacqueline; Jozefowicz, Marcel; Sedel, Laurent; Correia, Jose
PATENT ASSIGNEE(S): Iterfi, Fr.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076562	A1	20001221	WO 2000-FR1603	20000609
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2794649	A1	20001215	FR 1999-7401	19990611
FR 2794649	B1	20030411		
EP 1189644	A1	20020327	EP 2000-940481	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2003501217	T2	20030114	JP 2001-502893	20000609
US 2002169120	A1	20021114	US 2001-16706	20011211

PRIORITY APPLN. INFO.: FR 1999-7401 A 19990611
WO 2000-FR1603 W 20000609

AB The invention concerns a biol. active material essentially comprising at least an insolubilized dextran deriv. of general formula DMCaBbSucSd and at least a growth factor having an activity on **osteoarticular, dental** and/or **maxillofacial** tissues, and the method for prepg. same. The invention also concerns the uses of said biomaterial for prepg. a repair or filling material, such as an implant, for **osteoarticular, dental** or **maxillofacial** applications and for prepg. an orthopedic, **dental** or **maxillofacial** prosthesis, and the prosthesis coated with said biol. active material. A hydrogel comprising dextran derivs. crosslinked with sodium trimetaphosphate and 0.5 ng/gel **bone** morphogenic protein was prepd. and lyophilized to obtain a powder. Thus, 15 mg of the above powder was rehydrated with 100 .mu.L water and used as a **bone** implant to fill a **bone** cavity of about 50 mm3.

IC ICM A61L027-54
ICS A61L027-22; A61L027-20; A61L027-26; A61L027-48; A61L027-46
CC 63-7 (Pharmaceuticals)
IT **Bone formation**
Coral
Crosslinking agents
Dental materials and appliances
Prosthetic materials and Prosthetics
Tooth
(biol. active material based on insolubilized dextran deriv. and growth factor)
IT **Bone morphogenetic proteins**
Growth factors, animal
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biol. active material based on insolubilized dextran deriv. and growth factor)

IT **Prosthetic materials and Prosthetics**
(implants; biol. active material based on insolubilized dextran deriv. and growth factor)

IT **Prosthetic materials and Prosthetics**
(orthopedic; biol. active material based on insolubilized dextran deriv. and growth factor)

IT 1306-06-5, Hydroxyapatite 7758-87-4, Tricalcium phosphate **9004-54-0D**, Dextran, derivs., biological studies 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid lactic acid copolymer
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biol. active material based on insolubilized dextran deriv. and growth factor)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:790360 HCAPLUS
DOCUMENT NUMBER: 133:355218
TITLE: Gene therapy using TGF-.beta.
INVENTOR(S): Noh, Moon Jong; Kang, Kyoung Ae; Lee, Kwan Hee
PATENT ASSIGNEE(S): Kolon Industries, Inc., S. Korea
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066177	A1	20001109	WO 2000-IB653	20000503
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
KR 2000072904	A	20001205	KR 1999-15854	19990503
US 6315992	B1	20011113	US 1999-345415	19990630
EP 1175228	A1	20020130	EP 2000-925522	20000503
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.:
KR 1999-15854 A 19990503
US 1999-345415 A 19990630
WO 2000-IB653 W 20000503

AB The subject invention is related to a cell-mediated gene therapy treatment for orthopedic disease using a member belonging to the transforming growth factor-.beta. (TGF-.beta.) superfamily. TGF-.beta. gene therapy as a new

treatment method for degenerative arthritis is demonstrated. After transfection of TGF-.beta. cDNA expression vectors into fibroblasts (NIH 3T3-TGF-.beta.1), the cells were injected into rabbit Achilles tendon and knee joints with artificially-made cartilage defects. Intratendinous injections were performed to det. the optimal concn. for in vivo expression. Partially defected cartilage model was made to simulate degenerative arthritis of the knee joint. The partial cartilage defect treated with the cell-mediated gene therapy procedure was covered by newly formed hyaline cartilage which indicates that the cells survived and stimulated matrix formation in this area. Completely denuded cartilage areas were covered by fibrous collagen.

IC ICM A61K048-00
ICS C12N015-09; C12N015-63; C07K014-95

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 15

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2; antiarthritic gene therapy using TGF-.beta.)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3; antiarthritic gene therapy using TGF-.beta.)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4; antiarthritic gene therapy using TGF-.beta.)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5; antiarthritic gene therapy using TGF-.beta.)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(6; antiarthritic gene therapy using TGF-.beta.)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; antiarthritic gene therapy using TGF-.beta.)

IT Antiarthritics
Cartilage
Chondrocyte
Electroporation
Fibroblast
Gene therapy
Joint, anatomical
Ligament
Mesenchyme
Molecular cloning
Osteoblast
Plasmid vectors

Tendon
Transformation, genetic
Transplant and Transplantation
Virus vectors
(antiarthritic gene therapy using TGF-.beta.)

IT **Transforming growth factors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding; antiarthritic gene therapy using TGF-.beta.)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; antiarthritic gene therapy using TGF-.beta.)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-; antiarthritic gene therapy using TGF-.beta.)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.2-; antiarthritic gene therapy using TGF-.beta.)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.3-; antiarthritic gene therapy using TGF-.beta.)

IT **9015-73-0**
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiarthritic gene therapy using TGF-.beta.)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:513547 HCAPLUS
DOCUMENT NUMBER: 133:125280
TITLE: Compositions and methods for controlled delivery of virus vectors
INVENTOR(S): Levy, Robert J.; Jones, Peter L.
PATENT ASSIGNEE(S): Children's Hospital of Philadelphia, USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000043044	A1	20000727	WO 2000-US1193	20000119

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 1999-116405P P 19990119

AB The invention relates to compns. and methods for delivering a virus vector to an animal. The compns. include compns. which comprise a matrix having a virus vector bound at the exterior surface thereof in a physiol. reversible manner. The invention also includes methods of making such compns., including particles, devices, bulk materials, and other objects which comprise, consist of, or are coated with such compns. Methods of delivering a virus vector to an animal tissue are also described.

IC ICM A61K048-00
ICS C12N015-63; A61B019-00; C07H021-04

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 3

IT **Platelet-derived growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(-.beta.; compns. and methods for controlled delivery of virus vectors)

IT **Bone morphogenetic proteins**
Platelet-derived growth factors
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(compns. and methods for controlled delivery of virus vectors)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(.beta.-; compns. and methods for controlled delivery of virus vectors)

IT 9002-06-6, Thymidine kinase 9002-64-6, Pth 9002-72-6, Somatotropin **61912-98-9**, Insulin like growth factor **62031-54-3**, Fgf 139639-23-9, Tissue plasminogen activator
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(compns. and methods for controlled delivery of virus vectors)

IT 97-90-5, Ethylene glycol dimethacrylate 108-05-4D, Vinyl acetate, copolymers 1306-06-5, Hydroxyapatite 6606-65-1 7440-06-4, Platinum, biological studies 7440-32-6, Titanium, biological studies 7758-87-4, Tricalcium phosphate 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-17-2, Polybutadiene 9003-18-3 9003-20-7, Vinyl acetate homopolymer 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9003-54-7, PolyStyrene acrylonitrile 9003-56-9 9004-35-7, Cellulose acetate 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid 9011-14-7, Polymethylmethacrylate 9012-36-6, Agarose 9016-80-2, Polymethylpentene 9017-21-4, Polymethylstyrene 9046-31-5, Polystyrene carboxylic acid 10586-17-1, Isopropyl cyanoacrylate 12597-68-1, Stainless steel, biological studies 15802-18-3D, polyalkyl derivs. 21982-30-9, Hydroxymethyl methacrylate 24937-78-8, Ethylene vinyl acetate copolymer 24980-41-4, Polycaprolactone 24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile 25068-26-2,

Polymethylpentene 25087-26-7, Polymethacrylic acid 25102-52-7, Butadiene-isoprene copolymer 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid-lactic acid copolymer 50851-57-5, Polystyrene sulfonic acid 61128-18-5, Caprolactone glycolic acid copolymer
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-delivery matrix; compns. and methods for controlled delivery of virus vectors)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:493334 HCAPLUS
DOCUMENT NUMBER: 133:125276
TITLE: Sustained delivery of polyionic bioactive agents
INVENTOR(S): Levy, Robert J.
PATENT ASSIGNEE(S): The Children's Hospital of Philadelphia, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041647	A1	20000720	WO 2000-US1317	20000119
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6395029	B1	20020528	US 1999-234011	19990119

PRIORITY APPLN. INFO.: US 1999-234011 A 19990119

AB The invention relates to compns. and methods for delivering a polyionic bioactive compn. such as a nucleic acid to a tissue of an animal. The compns. of the invention include compns. which comprise a matrix comprising the polyionic bioactive agent and wherein at least most of the polyionic bioactive agent at the exterior portion of the matrix is present in a condensed form. The invention also includes methods of making such compns., including particles, devices, bulk materials, and other objects which comprise, consist of, or are coated with such compns. Methods of delivering a polyionic bioactive agent to an animal tissue are also described. The invention further includes a method of storing a nucleic acid.

IC ICM A61F002-02
ICS A61F002-06; A61F013-00; A61K009-14; A61K009-16; A61K009-127; A61K047-00; A61K047-48
CC 63-5 (Pharmaceuticals)
IT Drug delivery systems
Prosthetic materials and Prosthetics

(implants; sustained delivery of nucleic acids and other polyionic bioactive agents)

IT Antisense oligonucleotides
Bone morphogenetic proteins
Cocoa butter
DNA
Ethylene-propylene rubber
Fluoropolymers, biological studies
Neoprene rubber, biological studies
Nitrile rubber, biological studies
Platelet-derived growth factors
Polyamides, biological studies
Polyanhydrides
Polycarbonates, biological studies
Polyesters, biological studies
Polyimides, biological studies
Polyoxyalkylenes, biological studies
Polysulfones, biological studies
Polyurethanes, biological studies
RNA
Rayon, biological studies
Ribozymes
Silicone rubber, biological studies
Stem cell factor
Waxes
cDNA
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sustained delivery of nucleic acids and other polyionic bioactive agents)

IT **Transforming growth factors**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(.beta.-; sustained delivery of nucleic acids and other polyionic bioactive agents)

IT 97-90-5, Ethylene glycol dimethacrylate 1306-06-5, Hydroxyapatite 6606-65-1 7440-06-4, Platinum, biological studies 7440-32-6, Titanium, biological studies 7758-87-4, Tricalcium phosphate 9002-06-6, Thymidine kinase 9002-64-6, Pth 9002-72-6, Growth hormone 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-17-2, Polybutadiene 9003-18-3, Acrylonitrile butadiene copolymer 9003-20-7, Polyvinylacetate 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-42-3, Polyethylmethacrylate 9003-53-6, Polystyrene 9003-56-9, Acrylonitrile butadiene styrene copolymer 9004-35-7, Cellulose acetate 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid 9011-14-7, Polymethylmethacrylate 9012-36-6, Agarose 9016-80-2, Polymethylpentene 9017-21-4, Polymethylstyrene 9046-31-5, Polystyrene carboxylic acid 10586-17-1, Isopropyl cyanoacrylate 12597-68-1, Stainless steel, biological studies 15802-18-3D, Cyanoacrylic acid, polyalkyl derivs. 21982-30-9, Hydroxymethyl methac rylate 24937-78-8, Ethylene vinyl acetate copolymer 24980-41-4, Polycaprolactone 24981-14-4, Polyvinyl fluoride 25068-26-2, Polymethylpentene 25087-26-7, Polymethacrylic acid 25102-52-7, Butadiene-isoprene copolymer 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3,

Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 50851-57-5, Polystyrene sulfonic acid 61128-18-5, Caprolactone-glycolic acid copolymer **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fgf 80137-67-3, Caprolactone-lactic acid copolymer 139639-23-9, Tissue plasminogen activator
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sustained delivery of nucleic acids and other polyionic bioactive agents)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:141482 HCAPLUS
DOCUMENT NUMBER: 132:185482
TITLE: Malleable paste for filling **bone** defects
INVENTOR(S): Gertzman, Arthur A.; Sunwoo, Moon Hae
PATENT ASSIGNEE(S): Musculoskeletal Transplant Foundation, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6030635	A	20000229	US 1998-31750	19980227
US 6326018	B1	20011204	US 1999-413815	19991007
EP 1127581	A1	20010829	EP 2000-301370	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6437018	B1	20020820	US 2000-515656	20000229
US 6458375	B1	20021001	US 2000-677891	20001003

PRIORITY APPLN. INFO.: US 1998-31750 A3 19980227
US 1999-365880 B2 19990803
US 2000-515656 A2 20000229

AB The invention is directed toward a malleable **bone** putty and a flowable gel compn. for application to a **bone** defect site to promote new **bone** growth at the site which comprises a new **bone** growth inducing compd. of demineralized lyophilized allograft **bone** powder. The **bone** powder has a particle size ranging from about 100 to about 850 .mu. and is mixed in a high mol. wt. hydrogel carrier, the hydrogel component of the carrier ranging from 0.3 to 3.0% of the compn. and having a mol. wt. of about at least 10,000 Daltons. The compn. contains about 25% to about 40% **bone** powder and can be addnl. provided with BMP's and a sodium phosphate buffer. A malleable putty of 2% soln. hyaluronic acid in isotonic saline with 250-420 .mu. cortical allograft **bone** powder at 30%. Freeze dried cortical allograft **bone** (502 mg) of particle size ranging 250-420 .mu. was mixed into 1170 mg of a 2% soln. of sodium hyaluronate in isotonic saline. The **bone** component is added to achieve a **bone** concn. of 30% (wt./wt.). The soln. was well mixed and allowed to stand for 2-3 h at room temp. to provide a malleable putty with excellent formability properties.

IC ICM A61L025-00

ICS A61L015-64; A61K035-32
NCL 424423000
CC 63-7 (Pharmaceuticals)
ST antibiotic **bone** defect filling paste
IT **Bone**, disease
(defect; malleable paste for filling **bone** defects)
IT Antibiotics
Antimicrobial agents
Bone formation
Particle size distribution
(malleable paste for filling **bone** defects)
IT **Bone morphogenetic proteins**
Enzymes, biological studies
Vitamins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(malleable paste for filling **bone** defects)
IT **Bone**
(powders; malleable paste for filling **bone** defects)
IT 56-75-7, Chloromycetin 57-92-1, biological studies 60-54-8, Tetracycline 69-53-4, Ampicillin 114-07-8, Erythromycin 1306-06-5, Hydroxylapatite (Ca5(OH)(PO4)3) 1403-66-3, Gentamicin 1404-04-2, Neomycin 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 1406-05-9, Penicillin 7440-70-2D, Calcium, salts, biological studies 7758-87-4, Calcium phosphate 7778-18-9 9001-12-1, Collagenase **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9012-76-4, Chitosan 9031-96-3, Peptidase 9035-73-8, Oxidase 9067-32-7, Sodium hyaluronate 10043-52-4, Calcium chloride (CaCl2), biological studies 18323-44-9, Clindamycin 25953-19-9, Cefazolin 32986-56-4 32988-50-4, Viomycin 104184-69-2, Azactam 106392-12-5, Pluronic 107043-88-9, N,O-Carboxymethyl chitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(malleable paste for filling **bone** defects)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:686567 HCAPLUS
DOCUMENT NUMBER: 131:303417
TITLE: Collagen-polysaccharide matrix for **bone** and cartilage repair
INVENTOR(S): Liu, Linshu; Spiro, Robert
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. 5,866,165.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5972385	A	19991026	US 1998-7731	19980115
US 5866165	A	19990202	US 1997-783650	19970115
US 6309670	B1	20011030	US 1999-324792	19990603

PRIORITY APPLN. INFO.: US 1997-783650 A2 19970115
US 1998-7731 A2 19980115
AB A matrix and a method for prepg. it are provided to support the growth of

tissue, such as **bone**, cartilage or soft tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to collagen. Collagen-hyaluronate conjugates were prepd. according to above method suing sodium periodate. Above conjugate matrix was implanted into a 5 mm by 3 mm defect created in the parietal **bone** of rats. All matrix-filled defects were completely radiodense after 28 days, with no distinctive defect borders, which indicated complete healing. Unfilled defects appeased as ovoid radiolucent areas with rounded corners, suggesting minimal healing.

IC ICM A61K038-39
ICS A61K009-10; A61K047-42; A61K047-36
NCL 424486000
CC 63-7 (Pharmaceuticals)
ST collagen polysaccharide matrix **bone** cartilage repair
IT Drying
(air; collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Freeze drying
Freezing
(collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **Bone morphogenetic proteins**
Interleukins
Platelet-derived growth factors
Proteins, general, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Fibrinogens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Collagens, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates with polysaccharides; collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Polysaccharides, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates, with collagen; collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **Bone**, disease
(defect; collagen-polysaccharide matrix for **bone** and cartilage repair)
IT **Bone**
Cartilage
(repair; collagen-polysaccharide matrix for **bone** and cartilage repair)
IT Animal tissue
(soft; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Collagens, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type I, conjugates with polysaccharides; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Collagens, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type II, conjugates with polysaccharides; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 62683-29-8, Colony-stimulating factor 173247-99-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

IT 7790-28-5, Sodium periodate.
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **9004-54-0DP**, Dextran, conjugates with with collagen, biological studies 9004-61-9DP, Hyaluronic acid, conjugates with with collagen 9005-32-7DP, Alginic acid, conjugates with with collagen 9007-28-7DP, Chondroitin sulfate, conjugates with with collagen 9042-14-2DP, Dextran sulfate, conjugates with with collagen 9050-30-0DP, Heparan sulfate, conjugates with with collagen 9056-36-4DP, Keratan sulfate, conjugates with with collagen 70226-44-7DP, Heparan, conjugates with with collagen
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:249066 HCAPLUS
DOCUMENT NUMBER: 130:287100
TITLE: Hydraulic surgical cements comprising calcium phosphate
INVENTOR(S): Lemaitre, Jaques; Bohner, Marc; Van Landuyt, Pascale
PATENT ASSIGNEE(S): H. C. Robert Mathys Stiftung, Switz.; Stratec Medical A.-G.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9917710	A1	19990415	WO 1998-EP6330	19981006
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2306562	AA	19990415	CA 1998-2306562	19981006
EP 1023032	A1	20000802	EP 1998-954344	19981006
EP 1023032	B1	20020102		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001518359	T2	20011016	JP 2000-514603	19981006
AT 211379	E	20020115	AT 1998-954344	19981006
ES 2170533	T3	20020801	ES 1998-954344	19981006
US 6425949	B1	20020730	US 2000-529054	20000707

PRIORITY APPLN. INFO.: WO 1997-EP5495 A 19971007
WO 1998-EP6330 W 19981006

AB The cement for surgical purposes comprises three components. The first component comprises .beta.-Ca3(PO4)2 (.beta.-TCP) particles; and Ca(H2PO4)2 (MCPA) or Ca(H2PO4)2.cntdot.H2O (MCPM) particles or phosphoric acid. The second component comprises water. The third component comprises particles having an av. diam. which is larger than the av. diam. of the .beta.-TCP particles of the first component. Upon mixing of the three components a hardened mass comprising brushite CaHPO4.cntdot.2H2O (DCPD) is formed. The .beta.-TCP particles have a sp. surface area of less than 10,000 m2/g and a Ca/P at. ratio different from 1.50. The component constitutes 1-99 % of the hardened mass. The cements according to the invention may be used in **dental** and **maxillofacial** surgery (alveolar ridge reconstruction, **dental** socket filling), for orthopedic applications (**bone** fracture repair, **bone** augmentation) and for local drug delivery (antibiotics, anti-inflammatory and anti-cancer drugs).

IC ICM A61K006-033
ICS A61L025-00; A61L027-00

CC 63-7 (Pharmaceuticals)

ST surgical cement calcium phosphate biodegradable polymer; **dental** cement calcium phosphate biodegradable polymer

IT **Bone**
(artificial, for temporary use; hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**bone**-derived, for drug delivery; hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT **Dental materials and appliances**
Medical goods
(cements; hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-65-3, Hydroxypropyl methyl cellulose 9012-36-6, Agarose 9012-76-4, Chitosan 11138-66-2, Xanthan gum 25249-16-5 25322-68-3
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:222847 HCAPLUS
DOCUMENT NUMBER: 130:257353
TITLE: Inorganic-polymer complexes for the controlled release of compounds including medicinals
INVENTOR(S): Royer, Garfield P.
PATENT ASSIGNEE(S): Buford Biomedical, Inc., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9915150	A1	19990401	WO 1998-US19528	19980922
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6391336	B1	20020521	US 1997-935300	19970922
CA 2303884	AA	19990401	CA 1998-2303884	19980922
AU 9894925	A1	19990412	AU 1998-94925	19980922
EP 1017364	A1	20000712	EP 1998-948335	19980922
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001517613	T2	20011009	JP 2000-512521	19980922

PRIORITY APPLN. INFO.: US 1997-935300 A2 19970922
WO 1998-US19528 W 19980922

AB This invention relates generally to the prodn. and use of inorg.-polymer complexes for the controlled release of compds. including medicinals. Advantageously, the inorg. used is calcium sulfate. CaSO4 1000, norfloxacin 50, and iodipamide 110 mg, all finely ground, were mixed and to this mixt. was added 0.6 mL of hyaluronic acid soln. (2 %). The slurry was mixed and loaded into the barrel of a syringe for administration or casting in a mold.

IC ICM A61K009-00
ICS A61K009-36

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 5

IT **Bone**, disease
(defect; drug delivery systems contg. inorg. compds. and matrix polymers and complexing agents)

IT **Bone morphogenetic proteins**
Glycosaminoglycans, biological studies
Growth factors, animal
Lecithins
Lipids, biological studies
Pheromones, animal

Polynucleotides
Polyoxyalkylenes, biological studies
Proteins, general, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug delivery systems contg. inorg. compds. and matrix polymers and complexing agents)

IT 50-03-3, Hydrocortisone acetate 50-23-7 57-27-2, Morphine, biological studies 57-88-5, Cholest-5-en-3-ol (3.beta.)-, biological studies 59-46-1, Procaine 87-08-1, Penicillin V 112-38-9, 10-Undecenoic acid 124-07-2, Octanoic acid, biological studies 133-16-4, Chloroprocaine 137-58-6, Lidocaine 140-28-3, Benzathine 147-52-4, Nafcillin 154-21-2, Lincomycin 466-99-9, Hydromorphone 606-17-7, Iodipamide 721-50-6, Prilocaine 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1403-66-3, Gentamicin 1404-90-6, Vancomycin 1406-05-9, Penicillin 1406-11-7, Polymyxin 2203-97-6, Hydrocortisone succinate 6678-14-4 7585-39-9D, .beta.-Cyclodextrin, hydroxypropyl ethers 7778-18-9, Calcium sulfate 9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Polyacrylic acid 9003-39-8, PVP 9003-47-8, Polyvinylpyridine 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-65-6, Polysorbate 80 9007-28-7, Chondroitin sulfate 9042-14-2, Dextran sulfate 10118-90-8, Minocycline 11138-66-2, Xanthan gum 15663-27-1, cis-Platin 15686-71-2, Cephalexin 22199-08-2, Silver sulfadiazine 24991-23-9 25322-68-3 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 25953-19-9, Cefazolin 26063-13-8, Polyaspartic acid 26336-38-9, Polyvinylamine 26913-06-4, Poly[imino(1,2-ethanediyl)] 36637-18-0, Etidocaine 37517-28-5, Amikacin 38396-39-3, Bupivacaine 39831-55-5, Amikacin sulfate 52580-78-6, Polymyxin sulfate 53648-55-8, Dezocine 61477-96-1, Piperacillin 64221-86-9, Imipenem 70458-96-7, Norfloxacin 81103-11-9, Clarithromycin 85721-33-1, Ciprofloxacin 93106-60-6, Enrofloxacin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug delivery systems contg. inorg. compds. and matrix polymers and complexing agents)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:48632 HCAPLUS
DOCUMENT NUMBER: 130:100691
TITLE: Crosslinked polysaccharide drug carrier
INVENTOR(S): Spiro, Robert C.; Thompson, Andrea Y.; Liu, Linshu
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9901143	A1	19990114	WO 1998-US13997	19980701

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,

NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9882909	A1	19990125	AU 1998-82909	19980701	
AU 752800	B2	20021003			
EP 1011690	A1	20000628	EP 1998-933196	19980701	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI					
JP 2002509538	T2	20020326	JP 1999-507459	19980701	
NZ 502134	A	20020328	NZ 1998-502134	19980701	

PRIORITY APPLN. INFO.: US 1997-887994 A 19970703
WO 1998-US13997 W 19980701

AB A carrier and a method for prepg. it are provided for use in the delivery of therapeutic agents. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent oxime linkages with a second polysaccharide and each of the first and second polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratan sulfate, heparan, heparan sulfate and alginate. Hyaluronic acid was treated with ethylenediamine and EDC to give a deriv., which was mixed with an oxidized hyaluronic acid to form a gel. BFGF was incorporated into the above gel.

IC ICM A61K031-715
ICS A61K009-14

CC 63-6 (Pharmaceuticals)

IT **Bone formation**
(crosslinked polysaccharide drug carriers)

IT Cytokines
DNA
Growth factors, animal
Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinked polysaccharide drug carriers)

IT **9004-54-0D**, Dextran, derivs., crosslinked, biological studies
9005-32-7D, Alginic acid, derivs., crosslinked 9005-49-6D, Heparin, derivs., crosslinked, biological studies 9042-14-2D, Dextran sulfate, derivs., crosslinked 9050-30-0D, Heparan sulfate, derivs., crosslinked 9056-36-4D, Keratan sulfate, derivs., crosslinked 24967-94-0D, Dermatan sulfate, derivs., crosslinked **62031-54-3**, Fibroblast growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinked polysaccharide drug carriers)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:667970 HCAPLUS
DOCUMENT NUMBER: 129:301742
TITLE: Incorporation of amino acid analog(s) into polypeptides in proline auxotroph cells
INVENTOR(S): Gruskin, Elliott A.; Buechter, Douglas D.; Zhang, Guanghui; Connolly, Kevin
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 24 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5821089	A	19981013	US 1996-655086	19960603
CA 2328423	AA	19991125	CA 1998-2328423	19980520
WO 9960099	A1	19991125	WO 1998-US10272	19980520
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9875813	A1	19991206	AU 1998-75813	19980520
AU 746967	B2	20020509		
EP 1080182	A1	20010307	EP 1998-923546	19980520
R: CH, DE, ES, FR, GB, IT, LI, SE				
JP 2002515241	T2	20020528	JP 2000-549707	19980520
US 6492508	B1	20021210	US 1998-169768	19981009

PRIORITY APPLN. INFO.: US 1996-655086 A 19960603
WO 1998-US10272 A 19980520

AB Incorporation of certain amino acid analogs into polypeptides produced by cells which do not ordinarily provide polypeptides contg. such amino acid analogs is accomplished by subjecting the cells to growth media contg. such amino acid analogs. The degree of incorporation can be regulated by adjusting the concn. of amino acid analogs in the media and/or by adjusting osmolality of the media. Such incorporation allows the chem. and phys. characteristics of polypeptides to be altered and studied. For example, hydroxyproline is incorporated into protein in Escherichia coli, Saccharomyces cerevisiae, or in a baculovirus expression system (Sf9 cells) under proline starvation conditions. Expression vectors contg. the gene for human type I (.alpha.1) collagen are transformed into prokaryotic or eukaryotic proline auxotrophs which depend upon externally supplied proline for protein synthesis and anabolism. Substitution of the amino acid analog(s) occurs since prolyl-tRNA is sufficiently promiscuous to allow misacylation of proline tRNA with the amino acid analog(s).

IC ICM C12P021-00
ICS C12N005-00
NCL 435071100
CC 16-4 (Fermentation and Bioindustrial Chemistry)
IT **Bone morphogenetic proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(fusion protein with type I collagen .alpha.1 subunit; incorporation of amino acid analog(s) into polypeptides in proline auxotroph cells)
IT 50-99-7, Glucose, biological studies 56-40-6, Glycine, biological studies 57-50-1, Sucrose, biological studies 69-79-4, Maltose 7447-40-7, Potassium chloride (KCl), biological studies 7647-14-5, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 25322-68-3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(osmolality increasing agent; incorporation of amino acid analog(s) into polypeptides in proline auxotroph cells)
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:635680 HCAPLUS
DOCUMENT NUMBER: 129:265493
TITLE: **Osteogenic** devices and methods of use thereof for repair of **bone**
INVENTOR(S): Rueger, David C.; Tucker, Marjorie M.; Chang, An-cheng
PATENT ASSIGNEE(S): Creative Biomolecules, Inc., USA
SOURCE: PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9841246	A2	19980924	WO 1998-US6043	19980320
WO 9841246	A3	19981022		
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2001014662	A1	20010816	US 1997-822186	19970320
AU 9867795	A1	19981012	AU 1998-67795	19980320
AU 751451	B2	20020815		
EP 968012	A2	20000105	EP 1998-913183	19980320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001516262	T2	20010925	JP 1998-540868	19980320

PRIORITY APPLN. INFO.: US 1997-822186 A 19970320
WO 1998-US6043 W 19980320

AB Disclosed herein are improved **osteogenic** devices and methods of use thereof for repair of **bone** and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less **osteogenic** protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to crit. size defects, non-crit. size defects, non-union fractures, fractures, **osteochondral** defects, subchondral defects, and defects resulting from degenerative diseases such as **osteochondritis** dissecans.
IC ICM A61L027-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 2, 3
ST **bone** repair **osteogenic** protein sequence
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(10; **osteogenic** devices and methods of use thereof for repair of **bone**)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(11; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(12; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(15; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(16; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(3; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(5; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(60A; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(6; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(9; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(DPP (decapentaplegic); **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF1, growth differentiation factor 1; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF10, growth differentiation factor 10; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU

(Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF11, growth differentiation factor 11; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF3, growth differentiation factor 3; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF6, growth differentiation factor 6; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF7, growth differentiation factor 7; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF8, growth differentiation factor 8; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF9, growth differentiation factor 9; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(OP-1; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(OP-2; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(OP-3; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Vgl; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Vgr; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Cartilage
(formation of; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Fibrins

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(glue; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Binders
Physiological saline solutions
Wetting agents
(**osteogenic** devices and methods of use thereof for repair of **bone**)

IT Apatite-group minerals
Collagens, biological studies
Fibrinogens
Petrolatum
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices and methods of use thereof for repair of **bone**)

IT Proteins, specific or class
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic**; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT **Bone formation**
(repair; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT Fats and Glyceridic oils, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sesame; **osteogenic** devices and methods of use thereof for repair of **bone**)

IT 69-65-8, Mannitol 1306-06-5, Hydroxyapatite 7758-87-4, Tricalcium phosphate 9002-04-4, Thrombin 9004-32-4, Sodium carboxymethylcellulose 9004-34-6D, Cellulose, alkyl derivs., biological studies **9004-54-0**, Dextran, biological studies 9004-62-0, Hydroxyethylcellulose 9004-65-3 9004-67-5, Methylcellulose 9032-42-2, Methylhydroxyethylcellulose
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**osteogenic** devices and methods of use thereof for repair of **bone**)

L31 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:509084 HCAPLUS
DOCUMENT NUMBER: 129:140714
TITLE: Collagen-polysaccharide matrix for **bone** and cartilage repair
INVENTOR(S): Liu, Linshu; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9831345 A1 19980723 WO 1998-US838 19980115
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 5866165 A 19990202 US 1997-783650 19970115
AU 9859203 A1 19980807 AU 1998-59203 19980115
AU 727430 B2 20001214
EP 994694 A1 20000426 EP 1998-902579 19980115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2000514698 T2 20001107 JP 1998-534551 19980115
JP 3348861 B2 20021120
NZ 336480 A 20010330 NZ 1998-336480 19980115
PRIORITY APPLN. INFO.: US 1997-783650 A 19970115
WO 1998-US838 W 19980115

AB A matrix and a method for prepg. it are provided to support the growth of tissue, such as **bone**, cartilage or soft tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to collagen. Hyaluronic acid was treated with NaIO4 to give hyaluronic polyaldehyde, which was mixed with collagens at the ratio of 1:1. The matrix was implanted into a defective area created in the parietal **bone** of rats. The radiog. anal. showed that all matrix-filled defects were completely radiodense, with no distinctive defect borders, which indicated complete healing.

IC ICM A61K009-10
ICS A61K047-42; A61K047-36

CC 63-7 (Pharmaceuticals)

ST collagen polysaccharide matrix **bone** cartilage repair; hyaluronate collagen matrix **bone** defect filler

IT Musculoskeletal diseases
Musculoskeletal diseases
(cartilage, injury; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Bone morphogenetic proteins**
Fibrinogens
Fibrins
Hedgehog protein
Interleukins
Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(differentiation factors; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Cartilage
Cartilage
(disease, injury; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Prosthetic materials and Prosthetics**

(implants; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Bone**, disease
Bone, disease
(injury; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxidized, reaction products collagens; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Animal tissue
(soft, injury; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Collagens, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(type I, reaction products with oxidized polysaccharides; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT Collagens, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(type II, reaction products with oxidized polysaccharides; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; collagen-polysaccharide matrix for **bone** and cartilage repair)

IT 7790-28-5, Sodium periodate
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

IT 9002-04-4, Thrombin **9004-54-0D**, Dextran, oxidized, reaction products with collagens, biological studies 9004-61-9D, Hyaluronic acid, oxidized, reaction products with collagens 9005-32-7D, Alginic acid, oxidized, reaction products with collagens 9007-28-7D, Chondroitin sulfate, oxidized, reaction products with collagens 9042-14-2D, Dextran sulfate, oxidized, reaction products with collagens 9050-30-0D, Heparan sulfate, oxidized, reaction products with collagens 9056-36-4D, Keratan sulfate, oxidized, reaction products with collagens 24967-94-0D, Dermatan sulfate, oxidized, reaction products with collagens **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 62683-29-8, Colony-stimulating factor 70226-44-7D, Heparan, oxidized, reaction products with collagens
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for **bone** and cartilage repair)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:479444 HCAPLUS
DOCUMENT NUMBER: 129:113542
TITLE: Functional group-containing plasma polymers as reactive coatings
INVENTOR(S): Chabrecek, Peter; Lohmann, Dieter
PATENT ASSIGNEE(S): Novartis A.-G., Switz.
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9828026	A1	19980702	WO 1997-EP7201	19971219
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9859849	A1	19980717	AU 1998-59849	19971219
AU 732216	B2	20010412		
EP 946220	A1	19991006	EP 1997-954745	19971219
EP 946220	B1	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1245439	A	20000223	CN 1997-181530	19971219
BR 9714429	A	20000425	BR 1997-14429	19971219
NZ 336158	A	20001222	NZ 1997-336158	19971219
JP 2001507255	T2	20010605	JP 1998-528383	19971219
ZA 9711491	A	19980623	ZA 1997-11491	19971222
NO 9903064	A	19990621	NO 1999-3064	19990621
US 6436481	B1	20020820	US 1999-331516	19990622

PRIORITY APPLN. INFO.: EP 1996-810890 A 19961223
WO 1997-EP7201 W 19971219

AB A substrate with a primary polymeric coating contg. reactive groups predominantly on its surface is prepd. by plasma polymn. of an unsatd. compd. contg. reactive groups onto the substrate, and the concn. of the reactive groups in the coating, based on spin label detn. by ESR is 0.2-20 .times. 10-9, and more preferably 2-12 .times. 10-9. The reactive primary coatings may be reacted with monomeric, oligomeric or macromol. compds. of synthetic, semisynthetic or biol. origin to provide hybrid-type coated articles (secondary coatings). Thus, a macromer of Fomblin ZDOL-KF 6001 (hydroxypropyl-terminated polydimethylsiloxane) triblock copolymer functionalized with 2-isocyanatoethyl methacrylate was polymd. with TRIS and N,N-dimethylacrylamide and molded to give contact lenses. The contact lenses were then coated (grafted) by after-glow radio frequency plasma polymn. of 2-isocyanatoethyl methacrylate onto the lenses. The concn. of functional groups on the substrate surface was 4.09 .times. 10-9. The coated lenses were then treated with bovine serum albumin. The albumin modified lens exhibited advancing angle 26, receding angel 19, and contact angle hysteresis 7.

IC ICM A61L027-00
ICS A61L029-00; G02B001-04; C08J007-12

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 38, 42

IT Artery
Artery
Bone
Heart
Kidney
Liver

Organ, animal
Pancreas
Pancreas
(artificial; functional group-contg. plasma polymers as reactive coatings for medical goods)

IT Contact lenses
Dental materials and appliances
Drug delivery systems
Intraocular lenses
Medical goods
Prosthetic materials and Prosthetics
Prosthetic materials and Prosthetics
(functional group-contg. plasma polymers as reactive coatings for medical goods)

IT **Prosthetic materials and Prosthetics**
(implants; functional group-contg. plasma polymers as reactive coatings for medical goods)

IT Agglutinins and Lectins
Antibodies
Antigens
Carbohydrates, biological studies
DNA
Enzymes, biological studies
Glycolipids
Glycopeptides
Glycoproteins, general, biological studies
Glycosaminoglycans, biological studies
Growth factors, animal
Immunoglobulins
Lipoproteins
Nucleotides, biological studies
Oligosaccharides, biological studies
Peptides, biological studies
Phospholipids, biological studies
Polysaccharides, biological studies
RNA
Sphingolipids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reaction products with reactive coatings; functional group-contg. plasma polymers as reactive coatings for medical goods)

IT **9004-54-0D**, Dextran, reaction products with reactive coatings, biological studies 9005-49-6D, Heparin, reaction products with reactive coatings, biological studies 12619-70-4D, Cyclodextrin, reaction products with reactive coatings
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(functional group-contg. plasma polymers as reactive coatings for medical goods)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:544101 HCAPLUS
DOCUMENT NUMBER: 125:177462
TITLE: Surface-modified nanoparticles and method of making and using them
INVENTOR(S): Levy, Robert J.; Labhasetwar, Vinod; Song, Cunxian S.
PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 170 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9620698	A2	19960711	WO 1996-US476	19960104
WO 9620698	A3	19980122		
W: AL, AM, AT, AU, CA, CH, CN, CZ, DE, DK, GB, HU, IS, JP, KE, LU, VN, MN, NO, US				
RW: KE, LS, SD, AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, PT, SE, NL, MR, NE, SN				
CA 2207961	AA	19960711	CA 1996-2207961	19960104
AU 9647556	A1	19960724	AU 1996-47556	19960104
EP 805678	A1	19971112	EP 1996-903476	19960104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 10511957	T2	19981117	JP 1996-521279	19960104

PRIORITY APPLN. INFO.: US 1995-369541 19950105
US 1995-389893 19950216
WO 1996-US476 19960104

AB Biodegradable controlled-release nanoparticles as sustained release bioactive agent delivery vehicles include surface modifying agents to target binding of the nanoparticles to tissues or cells of living systems, to enhance nanoparticle sustained release properties, and to protect nanoparticle-incorporated bioactive agents. Unique methods of making small (10 nm to 15 nm, and preferably 20 nm to 35 nm) nanoparticles having a narrow size distribution which can be surface-modified after the nanoparticles are formed is described. Techniques for modifying the surface include a lyophilization technique to produce a phys. adsorbed coating and epoxy-derivatization to functionalize the surface of the nanoparticles to covalently bind mols. of interest. The nanoparticles may also comprise hydroxy-terminated or epoxide-terminated and/or activated multiblock copolymers, having hydrophobic segments which may be polycaprolactone and hydrophilic segments. The nanoparticles are useful for local intravascular administration of smooth muscle inhibitors and antithrombogenic agents as part of interventional cardiac or vascular catheterization such as a balloon angioplasty procedure; direct application to tissues and/or cells for gene therapy, such as the delivery of **osteotropic** genes or gene segments into **bone** progenitor cells; or oral administration in an enteric capsule for delivery of protein/peptide based vaccines.

IC A61K009-51
CC 63-6 (Pharmaceuticals)
IT **Animal growth regulators**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; surface-modified polymer controlled-release nanoparticles for sustained drug delivery)
IT Albumins, biological studies
Alkaloids, biological studies
Antigens
Deoxyribonucleic acids
Enzymes
Gelatins, biological studies
Gene, animal

Glycoproteins, biological studies
Hormones
Nucleic acids
Osteocalcins
Phosphazene polymers
Phosphoproteins
Polyanhydrides
Polyesters, biological studies
Polyethers, biological studies
Quaternary ammonium compounds, biological studies
Ribonucleic acids
Toxins
Urethane polymers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT Sialoglycoproteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(BSP II (**bone** sialoglycoprotein II), surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Dental materials and appliances**
(adhesives, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**blood platelet-derived growth factors**, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT Medical goods
(**bone** cements, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**bone morphogenetic proteins**, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT Glycophosphoproteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**osteonectins**, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT Glycophosphoproteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**osteopontins**, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Bone** marrow
(**osteoprogenitor** cell, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**transforming growth factors**, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **62229-50-9**, Epidermal growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(heparin-binding, -like compds.; surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT 50-70-4, D-Glucitol, biological studies 57-09-0, Cetyl trimethyl

ammonium bromide 57-10-3, Hexadecanoic acid, biological studies 57-88-5, Cholesterol, biological studies 69-65-8, D-Mannitol 102-71-6, Triethanolamine, biological studies 112-02-7, Hexadecyl trimethyl ammonium chloride 151-21-3, Sodium dodecyl sulfate, biological studies 577-11-7, Sodium dioctyl sulfosuccinate 1069-55-2, Isobutyl cyanoacrylate 3282-73-3, Didodecyldimethyl ammonium bromide 7445-62-7 7727-43-7, Barium sulfate 8007-43-0, Sorbitan sesquioleate 9000-65-1, Tragacanth 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9002-92-0, Polyoxyethylene lauryl ether 9003-39-8, Polyvinyl pyrrolidone 9003-53-6, Polystyrene 9004-32-4 9004-34-6, Cellulose, biological studies 9004-35-7, Cellulose acetate 9004-44-8, Cellulose phthalate 9004-64-2, Hydroxypropyl cellulose 9004-99-3 9005-49-6, Heparin, biological studies **9015-73-0** 9050-04-8, CM-cellulose calcium 9050-31-1, Hydroxypropyl methyl cellulose phthalate 10103-46-5, Calcium phosphate 25322-68-3 106392-12-5, Poloxamer 110617-70-4, Poloxamine 128835-92-7, Lipofectin 180741-27-9
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT 50-02-2, Dexamethasone 59-52-9 60-00-4, EDTA, biological studies 60-10-6, Dithizone 77-86-1 77-92-9, biological studies 87-69-4, biological studies 92-84-2D, Phenothiazine, derivs. 102-71-6D, Triethanolamine, fatty acid esters 139-13-9 144-62-7, Ethanedioic acid, biological studies 1306-06-5, Hydroxyapatite 1338-39-2, Span 20 2462-63-7 9000-01-5, Acacia gum 9003-05-8, Polyacrylamide **9004-54-0**, Dextran, biological studies 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9012-76-4, Chitosan 10102-43-9D, Nitric oxide, compds. 11128-99-7, Angiotensin II 14930-96-2, Cytochalasin B **61912-98-9**, Insulin-like growth factor 81845-44-5, Ciprostene 106096-92-8, Acidic fibroblast growth factor 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 122647-31-8, Ibutilide 130736-65-1, U 86983
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

L31 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:358762 HCAPLUS
DOCUMENT NUMBER: 122:170268
TITLE: Biocompatible implants carrying cells using a retroviral expression vector for use in the manufacture and secretion of therapeutic compounds
INVENTOR(S): Moullier, Philippe; Danos, Olivier; Heard, Jean-Michel; Ferry, Nicolas
PATENT ASSIGNEE(S): Institut Pasteur, Fr.
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9424298	A1	19941027	WO 1994-FR456	19940421
W: AU, CA, JP, US				

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
FR 2704236 A1 19941028 FR 1993-4700 19930421
FR 2704236 B1 19950623
FR 2708202 A1 19950203 FR 1993-9185 19930726
FR 2708202 B1 19960329
AU 9466812 A1 19941108 AU 1994-66812 19940421
AU 688321 B2 19980312
EP 702723 A1 19960327 EP 1994-914431 19940421
EP 702723 B1 20020904
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 08508880 T2 19960924 JP 1994-522856 19940421
EP 1231277 A2 20020814 EP 2002-3797 19940421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
AT 223493 E 20020915 AT 1994-914431 19940421
ES 2181717 T3 20030301 ES 1994-914431 19940421
US 5906817 A 19990525 US 1996-532814 19960119
AU 9859675 A1 19980604 AU 1998-59675 19980330
AU 704371 B2 19990422
US 6326195 B1 20011204 US 1999-225509 19990106
US 2002098223 A1 20020725 US 2001-987601 20011115
PRIORITY APPLN. INFO.: FR 1993-4700 A 19930421
FR 1993-9185 A 19930726
EP 1994-914431 A3 19940421
WO 1994-FR456 W 19940421
US 1996-532814 A3 19960119
US 1999-225509 A3 19990106

AB Neo-organ implants for use preferably in the peritoneal cavity of the recipient are described for use in the in situ synthesis and secretion of a therapeutic compd. The implant includes a biocompatible support for anchoring of cells that can secrete a therapeutic compd. embedded in a collagen gel. The cells may naturally synthesize the compd. or they may be transformed with a novel retrovirus expression vector from which the gag, pol, and env genes have been deleted to prevent viral replication. Fibroblasts transformed with a Moloney murine leukemia virus-based expression vector (M48) carrying .beta.-glucuronidase gene under control of the PGK promoter were immobilized on collagen-coated PTFE fibers and incorporated into a collagen gel in the presence of basic fibroblast growth factor. The implant was then introduced into the peritoneal cavity by attachment to the arms of the intestine in contact with the mesentery; the implant did not give rise to an inflammatory response. In animals showing a genetic .beta.-glucuronidase deficiency the implants caused a rapid fall in urinary secretion of intermediates from the catabolism of mucopolysaccharides and a spectacular normalization of the histol. of the liver and spleen.

IC ICM C12N015-86
ICS A61K048-00; C12N005-10; A61L027-00; A61K009-14; C12N009-24; C12N015-27; C12N009-12; C12N015-12; C12N015-56; C12N015-54
CC 63-7 (Pharmaceuticals)

IT **Bone**
(powd., as substrate for immobilization of cells for implants; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(angiogenic factors, as angiogenic factor in implants contg. transgenic cells; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic

compds.)

IT **Prosthetic materials and Prosthetics**
(implants, biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

IT 9002-84-0, PTFE **9004-54-0**, Dextran, biological studies
9004-61-9, Hyaluronic acid
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as substrate for immobilization of cells for implants; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

L31 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:253359 HCAPLUS
DOCUMENT NUMBER: 120:253359
TITLE: Biocompatible polymer conjugates of natural polymers
INVENTOR(S): Rhee, Woonza; Wallace, Donald G.; Michaels, Alan S.; Burns, Ramon A., Jr.; Fries, Louis; Delustro, Frank; Bentz, Hanne; Mccullough, Kimberly; Damani, Ramesh; Berg, Richard A.
PATENT ASSIGNEE(S): Collagen Corp., USA
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 18
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9401483	A1	19940120	WO 1993-US6292	19930701
W: AU, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5324775	A	19940628	US 1992-907518	19920702
US 5328955	A	19940712	US 1992-922541	19920730
US 5292802	A	19940308	US 1992-985680	19921202
US 5308889	A	19940503	US 1992-984197	19921202
AU 9346620	A1	19940131	AU 1993-46620	19930701
AU 677789	B2	19970508		
EP 648239	A1	19950419	EP 1993-916926	19930701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08502082	T2	19960305	JP 1993-503427	19930701

PRIORITY APPLN. INFO.:
US 1992-907518 A 19920702
US 1992-922541 A 19920730
US 1992-984197 A 19921202
US 1992-984933 A 19921202
US 1992-985680 A 19921202
US 1993-25032 A 19930302
US 1988-274071 B2 19881121
US 1989-433441 A2 19891114
WO 1993-US6292 A 19930701

AB Non-immunogenic conjugates are formed by covalently binding a biol. inactive, natural polymer or deriv. thereof to synthetic hydrophilic polymers, e.g. PEG, via specific types of chem. bonds. The biocompatible conjugates can be used for soft tissue augmentation and for coating or forming various articles. The compns. may include other components such as liq., pharmaceutically acceptable carriers to form injectable

formulations, and/or biol. active proteins such as growth factors or cytokines. A soln. of transforming growth factor .beta.1 (TGF-.beta.1) was added to a soln. of difunctionally activated PEG and the mixt. was allowed to react for 2 min at 17.degree.. To this soln. was added a fibrillar atelopeptide collagen soln. and the resulting mixt. allowed to incubate overnight at ambient temp. to form pellets comprising collagen-PEG-TGF-.beta.1 conjugate. After washing the pellets 6 times with phosphate buffer .apprx.50% of TGF-.beta.1 was retained in the compn.

IC ICM C08G063-48
ICS C08G063-91; C08H001-00; A61K037-12

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 38

IT Gelatins, biological studies
Rubber, silicone, biological studies
RL: BIOL (Biological study)
(beads, pharmaceutical compn. contg. conjugates of natural and synthetic polymers and, for repair of **bone** defects)

IT **Animal growth regulators**
Glycosaminoglycans, biological studies
Interferons
Lymphokines and Cytokines
RL: BIOL (Biological study)
(conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT Glass, oxide
RL: BIOL (Biological study)
(beads, pharmaceutical compn. contg. conjugates of natural and synthetic polymers and, for repair of **bone** defects)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, AA**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, AB**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, BB**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**bone morphogenetic proteins**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT Gels
(hydro-, beads, pharmaceutical compn. contg. conjugates of natural and synthetic polymers and, for repair of **bone** defects)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**osteogenins**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**.beta.-transforming growth factors**, conjugates with synthetic and natural polymers,

pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**.beta.2-transforming growth factors**, conjugates with synthetic and natural polymers, pharmaceutical compn. contg.)

IT 409-21-2, Silicon carbide, biological studies 1306-06-5, Hydroxyapatite 7758-87-4, Tricalcium phosphate 9002-84-0, Ptfe
RL: BIOL (Biological study)
(beads, pharmaceutical compn. contg. conjugates of natural and synthetic polymers and, for repair of **bone** defects)

IT **62229-50-9**, Epidermal growth factor
RL: BIOL (Biological study)
(conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT 9004-34-6D, Cellulose, ethers, conjugates with synthetic polymers **9004-54-0D**, Dextran, conjugates with synthetic polymers 9004-61-9D, Hyaluronic acid, conjugates with synthetic polymers 9004-62-0D, Hydroxyethyl cellulose, conjugates with synthetic polymers 9005-25-8D, Starch, conjugates with synthetic polymers 9061-61-4D, Nerve growth factor, conjugates with synthetic and natural polymers 11096-26-7D, Erythropoietin, conjugates with synthetic and natural polymers 12619-70-4D, Cyclodextrin, conjugates with synthetic polymers 24967-93-9D, Chondroitin sulfate a, conjugates with synthetic polymers 24967-94-0D, Dermatan sulfate, conjugates with synthetic polymers 25322-46-7D, Chondroitin sulfate c, conjugates with synthetic polymers **61912-98-9D**, Insulin-like growth factor, conjugates with synthetic and natural polymers 62683-29-8D, Colony stimulating factor, conjugates with synthetic and natural polymers 69344-76-9D, Connective tissue-activating peptide I, conjugates with synthetic and natural polymers 106096-92-8D, Acidic fibroblast growth factor, conjugates with synthetic and natural polymers 106096-93-9D, Basic fibroblast growth factor, conjugates with synthetic and natural polymers 111575-54-3D, conjugates with collagen 154467-38-6D, conjugates with collagen 154467-39-7
RL: BIOL (Biological study)
(pharmaceutical compn. contg.)

L31 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:91479 HCAPLUS
DOCUMENT NUMBER: 116:91479
TITLE: Surgical implant and method incorporating chemotherapeutic agents
INVENTOR(S): Jernberg, Gary R.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9117744	A1	19911128	WO 1991-US2784	19910423

W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT,

LU, ML, MR, NL, SE, SN, TD, TG

CA 2082398	AA	19911115	CA 1991-2082398	19910423
AU 9179096	A1	19911210	AU 1991-79096	19910423
EP 528971	A1	19930303	EP 1991-910569	19910423
EP 528971	B1	19990901		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5290271	A	19940301	US 1993-99265	19930729

PRIORITY APPLN. INFO.:
US 1990-523067 19900514
US 1990-599699 19901018
WO 1991-US2784 19910423
US 1992-899096 19920615

AB A surgical implant which provides controlled release and improved cellular uptake of chemotherapeutic agents over a predetd. period of time, is prepd. by incorporating time-release microshapes encapsulating .gtoreq.1 chemotherapeutic agent and carrier agents into a biocompatible implant. The implant can be a vascular graft, heart valve leaflet, artificial skin, etc.

IC ICM A61K009-22
ICS A61K009-52; A61L027-00

CC 63-7 (Pharmaceuticals)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**bone morphogenetic protein**, surgical implants contg. microencapsulated)

IT **Prosthetic materials and Prosthetics**
(implants, microencapsulated chemotherapeutics in)

IT **Prosthetic materials and Prosthetics**
(implants, vascular, microencapsulated chemotherapeutics in)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 53-06-5, Cortisone 53-86-1, Indomethacin 60-54-8, Tetracycline 114-07-8, Erythromycin 378-44-9, .beta.-Methasone 443-48-1, Metronidazole 644-62-2, Meclofenamic acid 1404-04-2, Neomycin 1404-90-6, Vancomycin 1406-05-9, Penicillin 5104-49-4 8063-07-8, Kanamycin **9004-54-0**, Dextran, biological studies 9005-49-6, Heparin, biological studies 11111-12-9, Cephalosporin 15687-27-1, Ibuprofen 22204-53-1, Naproxen 35121-78-9, Prostacyclin
RL: BIOL (Biological study)
(surgical implants contg. microencapsulated)

L31 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:538563 HCAPLUS
DOCUMENT NUMBER: 113:138563
TITLE: Purified particulate **bone** mineral for prosthetic **bone** replacement
INVENTOR(S): Pfirrmann, Rolf Wilhelm
PATENT ASSIGNEE(S): Geistlich, Ed, Sohne A.-G. fuer Chemische Industrie, Switz.; Holmes, Michael John
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9001955	A1	19900308	WO 1989-GB1020	19890816

W: CH, DE, GB, JP, US
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE

JP 04501070	T2	19920227	JP 1989-509992	19890816
EP 489728	A1	19920617	EP 1989-910649	19890816
EP 489728	B1	19970129		

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

AT 148350	E	19970215	AT 1989-910649	19890816
CA 1336402	A1	19950725	CA 1989-608699	19890818
US 5573771	A	19961112	US 1995-391247	19950221

PRIORITY APPLN. INFO.:

GB 1988-19755	19880819
WO 1989-GB1020	19890816
US 1990-469609	19900619
US 1992-876114	19920429
US 1993-115792	19930903
US 1994-258361	19940610

OTHER SOURCE(S): MARPAT 113:138563

AB A purified particulate **bone** mineral product comprises mineral particles free from all endogenous org. material and has resorbable, physiol. compatible, natural or synthetic macromol. material at the surface. The product is used as remodelling implants or prosthetic **bone** replacement. Aq. formaldehyde was added to 60.degree. gelatin soln. and deproteinated bovine femur cancellous **bone** pieces were added to the mixt. and vacuum applied and released for five times. The mixt. was left to stand at room temp. for 7 days and the **bone** pieces were then sepd. from the gel and dried in vacuum. The treated **bone** pieces were packed in polyethylene containers and sterilized by .gamma.-irradn. The ball pressure hardness and compressive strength was 5.1 and 4, compared to 2.5 and 0.8 N/mm2, resp. for the control without gelatin coating.

IC ICM A61L027-00

CC 63-7 (Pharmaceuticals)

ST **bone** mineral particulate gelatin coating; prosthetic implant **bone** mineral macromol matrix

IT Collagens, biological studies
Gelatins, biological studies
RL: BIOL (Biological study)
(**bone** mineral particulate coated with, for implant)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**bone** mineral particulate contg., for implant)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(angiogenic factors, **bone** mineral particulate contg., for implant)

IT **Bone**
(artificial, **bone** mineral particulate coated with macromols. as)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**bone morphogenetic protein, bone** mineral particulate contg., for implant)

IT **Bone**
(implant, **bone** mineral particulate coated with macromols. as)

IT **Prosthetic materials and Prosthetics**
(implants, **bone** mineral particulates coated with macromols. as, for **bone**)

IT Collagens, biological studies

RL: BIOL (Biological study)
(osseins, **bone** mineral particulate contg., for implant)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**osteogenins, bone** mineral particulate contg., for implants)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**transforming growth factors, bone** mineral particulate contg., for implant)

IT **9004-54-0**, Dextran, biological studies
RL: BIOL (Biological study)
(**bone** mineral particulate coated with, for implant)

IT 19388-87-5, Taurolidine 38668-01-8, Taurultam
RL: BIOL (Biological study)
(**bone** mineral particulate contg., for implants)

```
=> d que
L7        13610 SEA FILE=HCAPLUS ABB=ON  PLU=ON  DEXTRAN+NT/CT
L11       31790 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "GROWTH FACTORS, ANIMAL"+OLD/C
                T
L14       24623 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                PROSTHETICS"+OLD/CT
L15        4540 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BONE FORMATION/CT
L16        3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                OLD,NT/CT
L17       20049 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "DENTAL MATERIALS AND
                APPLIANCES"+OLD/CT
L18         117 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                PROSTHETICS (L) MAXILLOFACIAL"/CT
L24       17023 SEA FILE=HCAPLUS ABB=ON  PLU=ON  EPIDERMAL GROWTH FACTOR/CT
L25       18840 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "INSULIN-LIKE GROWTH FACTOR"+N
                T/CT
L26        3481 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "FIBROBLAST GROWTH FACTOR"/CT

L27       21413 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "TRANSFORMING GROWTH FACTORS"+
                OLD,NT/CT
L28        8044 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLATELET-DERIVED GROWTH
                FACTORS"+OLD,NT/CT
L29        3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                OLD,NT/CT
L30          51 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L24 OR L25 OR L26 OR L27 OR
                L28 OR L29) OR L11) AND L7 AND (L14 OR L15 OR L16 OR L17 OR
                L18)
L45           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND CROSSLINK?
L47           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (FREEZEDR? OR FREEZE
                DR?)
L49           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 AND HYDROGEL?
L51          15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L45 OR L47 OR L49

=> d ibib ab hitind 1-15

L51  ANSWER 1 OF 15  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:927491  HCAPLUS
DOCUMENT NUMBER:          138:8403
TITLE:                    Crosslinked elastin and process for
                          producing the same
INVENTOR(S):              Miyamoto, Keiichi
PATENT ASSIGNEE(S):       Japan
SOURCE:                   PCT Int. Appl., 54 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
     ----------------    ----  --------      ---------------  --------
     WO 2002096978        A1   20021205      WO 2002-JP5275   20020530
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
```

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2001-163505 A 20010530

AB Disclosed are **crosslinked** elastin; a water sol. **crosslinking** agent to be used in the **crosslinking**; molded elastin articles; medical instruments and regeneration tissues using the **crosslinked** elastin; and a surgical therapy and a regeneration therapy with the use of these medical instruments. Thus, a biocompatible functional material having an elasticity appropriate for vital transplantation without causing release of cell-adhesive proteins is provided.

IC ICM C08H001-06
ICS C08L089-06; A61L027-22

CC 63-7 (Pharmaceuticals)

ST **crosslinked** elastin biocompatible prosthetic

IT **Prosthetic materials and Prosthetics**
(implants; prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT Medical goods
(prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT Caseins, biological studies
Ciliary neurotrophic factor
Collagens, biological studies
Elastins
Fibrins
Fibronectins
Fluoropolymers, biological studies
Gelatins, biological studies
Keratins
Laminins
Polyesters, biological studies
Polyoxyalkylenes, biological studies
Polysiloxanes, biological studies
Polyurethanes, biological studies
Sericins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(soy; prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-; prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT 821-38-5, 1,12-Dodecanedicarboxylic acid 32279-04-2, 4-Hydroxyphenyldimethylsulfonium methyl sulfate
RL: RCT (Reactant); RACT (Reactant or reagent)
(prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)

IT 476628-71-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)
IT 1398-61-4, Chitin 9000-01-5, Arabic gum 9000-07-1, Carrageenan 9000-36-6, Karaya gum 9000-65-1, Traganth gum 9002-04-4, Thrombin 9002-18-0, Agar 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene 9004-32-4, Sodium CMC 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9007-27-6, Chondroitin 9007-28-7, Chondroitin sulfate 9011-14-7, Poly(methyl methacrylate) 9012-76-4, Chitosan 9016-00-6, Polydimethylsiloxane 9032-43-3, Cellulose sulfate 9042-14-2, Dextran sulfate 9057-02-7, Pullulan 11078-30-1, Galactomannan 11078-31-2, Glucomannan 11138-66-2, Xanthan gum 24967-94-0, Dermatan sulfate 24980-41-4, Polycaprolactone 24991-23-9 25038-59-9, Polyethylene terephthalate, biological studies 25104-18-1, Polylysine 25190-06-1, Polytetramethylene glycol 25248-42-4, Polycaprolactone 25249-06-3, Polygalacturonic acid 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 25513-46-6, Polyglutamic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 31900-57-9, Dimethylsilanediol homopolymer 37294-28-3, Xyloglucan 37339-90-5, Lentinan 38000-06-5, Polylysine 52519-63-8, Carboxymethyl chitin 54724-00-4, Curdlan **62229-50-9**, Epidermal growth factor 71010-52-1, Gellan gum 71010-52-1D, Gellan gum, sulfated 78644-42-5, Polymalic acid 78666-19-0, Polymalic acid sru 106096-93-9, Basic FGF 127464-60-2, Vascular endothelial growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prosthetic materials and medical goods made of **crosslinked** elastins and functional substances)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:482991 HCAPLUS
DOCUMENT NUMBER: 137:52468
TITLE: **Crosslinkable** macromers for preparation of matrixes for implanted articles
INVENTOR(S): Chudzik, Stephen J.; Clapper, David L.
PATENT ASSIGNEE(S): Surmodics, Inc., USA
SOURCE: U.S., 14 pp., Cont.-in-part of U. S. 6,156,345.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6410044	B1	20020625	US 2000-571525	20000516
US 6007833	A	19991228	US 1998-121248	19980723
US 6156345	A	20001205	US 1999-469976	19991221
WO 2002100453	A1	20021219	WO 2001-US18345	20010607

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2003031697 A1 20030213 US 2002-176203 20020620
PRIORITY APPLN. INFO.: US 1998-78607P P 19980319
US 1998-121248 A3 19980723
US 1999-469976 A2 19991221
US 2000-571525 A1 20000516

AB A **crosslinkable** macromer system and related methods of prepg. the system and using the system in the form of a **crosslinked** matrix between a tissue site and an implant article, such as a tissue implant or on the porous surface of a prosthetic device, is described. The macromer system includes two or more polymer-pendent polymerizable groups and one or more initiator groups (e.g., polymer-pendent initiator groups). The polymerizable groups and the initiator group(s), when polymer-pendent, can be pendent on the same or different polymeric backbones. The macromer system provides advantages over the use of polymerizable macromers and sep., low mol. wt. initiators, including advantages with respect to such properties as nontoxicity, efficiency, and soly. A macromer system of the invention can be used as an interface between the tissue site and implant article in a manner sufficient to permit tissue growth through the **crosslinked** matrix and between the tissue site and implant. In a preferred embodiment, polymers with pendent polymerizable groups, for use in the macromer system, are prepd. by reacting a polysaccharide polymer with a reactive moiety in an org., polar solvent, such as formamide. For example, a biodegradable tissue adhesive was prepd. contg. (i) 5% polymerizable hyaluronic acid, prepd. by reaction of hyaluronic acid and glycidyl acrylate in dry formamide, and (ii) 2% photoderivatized polyacrylamide, prepd. from acrylamide and N-(3-aminopropyl)methacrylamide (APMA). The max. force generated by the adhesive prepd. was 0.53 kg compared to 0.49 kg obtained for cyanoacrylate adhesive. Also, the photoderivatized polyacrylamide prepd. was used in combination with polymerizable collagen (a reaction product of a mixt. of type I and type III collagen with acryloyl chloride) for prepn. of a scaffold contg. bone morphogenetic protein (BMP-7). The exptl. disks of solidified collagen scaffold contg. BMP-7 stimulated bone formation in a rat cranial onlay implant model.

IC ICM A61F002-06
ICS A61F002-28; A61F013-00; A61F047-30
NCL 424423000
CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 35, 36

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Peptides, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(active sites of biol. active proteins; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Blood vessel
Hip
Joint, anatomical
(artificial; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Adhesives
(biol. tissue, biodegradable; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Drug delivery systems
(controlled-release; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Medical goods
(dressings; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **Prosthetic materials and Prosthetics**
(implants, vascular; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **Dental materials and appliances**
Prosthetic materials and Prosthetics
(implants; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Joint, anatomical
(knee, artificial; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Pore size
Porosity
(of implant surfaces; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Animal tissue
Antibacterial agents
Antimicrobial agents
Bone formation
Crosslinking
Immobilization, molecular
Polymerization catalysts
Transplant and Transplantation
Wound healing promoters
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Vinyl compounds, uses
RL: CAT (Catalyst use); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Macromonomers
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Albumins, biological studies
Collagens, biological studies
Elastins
Fibronectins
Gelatins, biological studies
Laminins
Polysaccharides, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Eye
(prostheses for; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Polymerization
(radical; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Animal tissue
(soft, prostheses; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Pentosans
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(sulfates; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Drug delivery systems
(sustained-release, coatings for; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Medical goods
(tissue adhesives, biodegradable; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Collagens, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(type I; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Collagens, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(type III; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT Hydrogels
(wound dressings; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 110-18-9, TEMED
RL: NUU (Other use, unclassified); USES (Uses)
(oxygen scavenger; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and

controlled drug delivery)

IT 9004-61-9DP, Hyaluronic acid, reaction products with glycidyl acrylate
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymerizable; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 78-67-1, 2,2'-Azobisisobutyronitrile
RL: CAT (Catalyst use); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 60-32-2, 6-Aminohexanoic acid 79-06-1, Acrylamide, reactions 80-62-6, Methyl methacrylate 88-12-0, reactions 95-96-5, 3,6-Dimethyl-1,4-dioxane-2,5-dione 106-90-1, Glycidyl acrylate 108-31-6, Maleic anhydride, reactions 502-44-3, .epsilon.-Caprolactone 814-68-6, Acryloyl chloride 6066-82-6, N-Hydroxysuccinimide 17372-87-1, Eosin Y 39148-58-8, 4-Benzoylbenzoyl chloride 42503-45-7, Pentaerythritol ethoxylate 51763-07-6, 7-Methyl-9-oxothioxanthene-3-carboxylic acid 72607-53-5, N-(3-Aminopropyl)methacrylamide hydrochloride 244211-74-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 55750-53-3P, 6-Maleimidohexanoic acid 55750-63-5P 57079-14-8P 244202-40-2P 244202-41-3P 244202-49-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 244202-45-7DP, acryloyl derivs. 244202-48-0P 244202-50-4P 244202-51-5P 438537-01-0P 438544-14-0P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate 9012-76-4, Chitosan 9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24967-94-0, Dermatan sulfate
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 106-90-1DP, Glycidyl acrylate, reaction products with hyaluronic acid 438537-00-9P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 56-81-5, Glycerol, biological studies 56-95-1, Chlorhexidine diacetate 102-71-6, Triethanolamine, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

IT 75-12-7, Formamide, uses
RL: NUU (Other use, unclassified); USES (Uses)

(solvent; prepn. of **crosslinkable** macromers and polymer matrixes for cell immobilization, tissue adherence and controlled drug delivery)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:353301 HCAPLUS
DOCUMENT NUMBER: 136:359642
TITLE: Mineralized collagen-polysaccharide matrix for bone and cartilage repair
INVENTOR(S): Liu, Lin Shu; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036147	A1	20020510	WO 2001-US42477	20011005
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002011850	A5	20020515	AU 2002-11850	20011005

PRIORITY APPLN. INFO.: US 2000-703438 A 20001031
WO 2001-US42477 W 20011005

AB A matrix and a method for prepg. it are provided to support the growth of tissue, such as bone, cartilage or soft connective tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to mineralized collagen. The matrix can be implanted or injected, or the polyaldehyde polysaccharide and mineralized collagen starting minerals can be sep. injected to form the matrix in situ. Mineralized Type I collagen and polysaccharide-polyaldehyde were prepd. by mixing collagens with hyaluronate-polyaldehyde soln. Sodium cyanoborohydride was added to the mixt. to the final concn. of 10 mM. The resulting slurry was then poured into a mold and lyophilized. This formed a matrix, which was washed with water to remove NaCNBH3 and re-lyophilized. The surface property, structures and biol. activity of the matrixes were controlled by altering the ratio of the collagen to the polysaccharides, the type of polysaccharides, the d. of aldehyde groups generated on the polysaccharides, the d. of matrix, as well as the process of lyophilization.

IC ICM A61K038-16
ICS A61K038-17; A61K009-14; A61K035-14
CC 63-6 (Pharmaceuticals)
IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ADMP 1; mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT **Prosthetic materials and Prosthetics**
(implants; mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT Bone
Cartilage
Drying
Freeze drying
(mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT **Bone morphogenetic proteins**
Fibrins
Growth factors, animal
Interleukins
Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT **9004-54-0DP**, Dextran, reaction products with collagens
9004-61-9DP, Hyaluronic acid, reaction products with collagens
9005-32-7DP, Alginic acid, reaction products with collagens 9007-28-7DP, Chondroitin sulfate, reaction products with collagens 9042-14-2DP, Dextran sulfate, reaction products with collagens 9050-30-0DP, Heparan sulfate, reaction products with collagens 9056-36-4DP, Keratan sulfate, reaction products with collagens 24967-94-0DP, Dermatan sulfate, reaction products with collagens 70226-44-7DP, Heparan, reaction products with collagens
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(mineralized collagen-polysaccharide matrix for bone and cartilage repair)

IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 62683-29-8, CSF
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mineralized collagen-polysaccharide matrix for bone and cartilage repair)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:792224 HCAPLUS
DOCUMENT NUMBER: 135:335182
TITLE: Collagen-polysaccharide matrix for treatment of bone tumors
INVENTOR(S): Heidaran, Mohammad; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 5,972,385.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6309670	B1	20011030	US 1999-324792	19990603
US 5866165	A	19990202	US 1997-783650	19970115
US 5972385	A	19991026	US 1998-7731	19980115

PRIORITY APPLN. INFO.: US 1997-783650 A2 19970115
US 1998-7731 A2 19980115

AB A method of treatment for bone tumors comprising administering a matrix comprising collagen, a polysaccharide and a differentiation factor is provided. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to collagen. For example, the collagen/hyaluronic acid/TGF-.beta. combination inhibited growth of the osteosarcoma cell line SK-ES-1 more potently than a combination of TGF-.beta. and collagen in a monolayer culture.

IC ICM A61K009-10
ICS A61K047-42; A61K047-36

NCL 424486000

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 2

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix contg. differentiation factors for treatment of bone tumors)

IT **Freeze drying**
(prepn. of collagen-polysaccharide matrix contg. differentiation factors for treatment of bone tumors)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; collagen-polysaccharide matrix contg. differentiation factors for treatment of bone tumors)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid 9007-28-7, Chondroitin sulfate 9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24967-94-0, Dermatan sulfate 70226-44-7, Heparan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix contg. differentiation factors for treatment of bone tumors)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:780648 HCAPLUS
DOCUMENT NUMBER: 135:335147
TITLE: Polymer-based injectable sustained release pharmaceutical compositions for peptide and protein drugs
INVENTOR(S): Lee, Hee-yong; Lee, Hye-suk; Kim, Jung-soo; Kim, Sang-beom; Lee, Ji-suk; Choi, Ho-il; Chang, Seung-gu
PATENT ASSIGNEE(S): Peptron Inc., S. Korea
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001078687	A1	20011025	WO 2001-KR462	20010322
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1187602	A1	20020320	EP 2001-917893	20010322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2003026844	A1	20030206	US 2002-18870	20020418

PRIORITY APPLN. INFO.:
KR 2000-20484 A 20000418
KR 2000-49344 A 20000824
WO 2001-KR462 W 20010322

AB Controlled and sustained release injectable pharmaceutical compns. for a biopharmaceutical, such as peptides and proteins are described. Processes for prepn. of an injectable sustained release compn. comprises (i) a step of prepg. biodegradable porous microspheres having accessible ionic functional groups, (ii) a step of encapsulating a biopharmaceutical into the microspheres through ionic interaction by suspending or equilibrating the microspheres in a soln. contg. the biopharmaceutical, and (iii) a step of recovering and **freeze-drying** the biopharmaceutical-incorporated microspheres. For example, microspheres were prepd. by water/oil/water double emulsion solvent evapn. method using a hydrophilic 50:50 PLGA polymer (RG 502H), which contains free carboxy end groups. Deionized water (800 mL) was added to 1 g of PLGA polymer dissolved in 2 mL of methylene chloride and emulsified by sonication for 30 s using a probe type ultrasonic generator. This primary emulsion was dispersed into 200 mL of deionized water contg. 0.5% polyvinyl alc. (wt./vol.) in a vessel which connected to a const. temp. controller and mixed well by stirring for 15 min at 2500 rpm, 25.degree. using a mixer. After mixing for another 15 min at 1500 rpm, 25.degree., temp. of continuous phase was increased to 40.degree. to evap. methylene chloride. After 1 h stirring at 40.degree., 1500 rpm, temp. was decreased to 25.degree.. The hardened microspheres were collected by centrifugation and washed twice with 200 mL of deionized water, and then **freeze -dried**. The microspheres obtained were used for incorporation of protein drugs, i.e., ovalbumin, bovine serum albumin, human growth hormone, RNase A, or lysozyme through ionic interaction by simply soaking and equilibrating the microspheres into a buffer soln. having an appropriate concn. of protein.

IC ICM A61K009-22
CC 63-6 (Pharmaceuticals)
IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cartilage-inducing factor; prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(osteogenic growth factors; prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)
IT Anti-infective agents
Antibacterial agents
Antiviral agents
Carboxyl group
Cryoprotectants
Evaporation
Fibrinolytics
Freeze drying
Particle size
Phase separation
Pulmonary surfactant
Solvent extraction
(prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)
IT Annexins
Bone morphogenetic proteins
Caseins, biological studies
Collagens, biological studies
Fibrinogens
Hemoglobins
Interferons
Interleukin 1
Interleukins
Lymphotoxin
Ovalbumin
Platelet-derived growth factors
Polyanhydrides
Polycarbonates, biological studies
Polymer blends
Polysaccharides, biological studies
Proteins, general, biological studies
Transferrins
Transforming growth factors
Tumor necrosis factors
Zeins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)
IT 121-54-0, Benzethonium chloride 151-21-3, Sodium lauryl sulfate, biological studies 577-11-7, Docusate sodium 1393-25-5, Secretin 1398-61-4, Chitin 1402-38-6, Oncostatin 8044-71-1, Cetrimide 9001-25-6, Blood-coagulation factor VII 9001-28-9, Factor IX 9001-63-2, Lysozyme 9002-01-1, Streptokinase 9002-60-2, Adrenocorticotrophic hormone, biological studies 9002-61-3, Human chorionic gonadotropin 9002-67-9, Luteinizing hormone 9002-68-0, Follicle stimulating hormone 9002-69-1, Relaxin 9002-71-5, Thyroid stimulating hormone 9002-72-6, Growth hormone 9002-89-5, Polyvinyl alcohol 9004-10-8, Insulin, biological studies 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 9007-27-6, Chondroitin 9007-92-5, Glucagon, biological studies 9011-97-6, Cholecystokinin 9012-76-4, Chitosan 9015-71-8,

Corticotropin releasing factor 9034-39-3, Growth hormone releasing factor 9035-68-1, Proinsulin 9039-53-6, Urokinase 9041-92-3, .alpha.1-Antitrypsin 9054-89-1, Superoxide dismutase 9056-36-4, Keratan sulfate 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin 15802-18-3D, Cyanoacrylic acid, esters, polymers 24980-41-4, Polycaprolactone 25104-18-1, Poly(L-lysine) 25248-42-4, Polycaprolactone 25868-59-1 25931-47-9 26009-03-0, Polyglycolide 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4, Polyglycolide 26680-10-4, Polylactide 26780-50-7, Poly(lactide-co-glycolide) 31621-87-1, Polydioxanone 34346-01-5, Resomer RG 502H 37221-79-7, Vasoactive intestinal polypeptide 38000-06-5, Poly(L-lysine) 52906-92-0, Motilin 57285-09-3, Inhibin 59392-49-3, Gastric inhibitory peptide 59763-91-6, Pancreatic polypeptide **61912-98-9**, Insulin-like growth factor **62229-50-9**, Epidermal growth factor 62683-29-8, Colony stimulating factor **67763-96-6**, Somatomedin C 77272-10-7, Macrocortin 80043-53-4, Gastrin releasing peptide 82657-92-9, Prourokinase 83652-28-2, Calcitonin gene-related peptide 85637-73-6, Atrial natriuretic factor 113189-02-9, Antihemophilic factor 139639-23-9, Tissue plasminogen activator
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of polymer-based injectable sustained-release microspheres for peptide and protein drugs)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:757812 HCAPLUS
DOCUMENT NUMBER: 135:308889
TITLE: **Crosslinked** polysaccharide drug carrier
INVENTOR(S): Spiro, Robert C.; Thompson, Andrea Y.; Liu, Linshu
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 887,994, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6303585	B1	20011016	US 1998-110381	19980701
US 2003012765	A1	20030116	US 2001-954855	20010917

PRIORITY APPLN. INFO.: US 1997-887994 B2 19970703
US 1998-110381 A1 19980701

AB A carrier and a method for prepg. it are provided for use in the delivery of therapeutic agents. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent oxime linkages with a second polysaccharide and each of the first and second polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratan sulfate, heparan, heparan sulfate and alginate. A hyaluronate amine deriv. was prepd. by treating hyaluronic acid with EDC and ethylenediamine.

IC ICM C08B037-00
ICS A61K031-715
NCL 514054000

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 33
ST **crosslinked** polysaccharide drug carrier
IT Drug delivery systems
(carriers; **crosslinked** polysaccharide drug carrier)
IT **Bone formation**
Crosslinking
Dissolution rate
(**crosslinked** polysaccharide drug carrier)
IT **Growth factors, animal**
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked** polysaccharide drug carrier)
IT 107-15-3DP, Ethylenediamine, reaction products with hyaluronic acid
9004-61-9DP, Hyaluronic acid, reaction products with ethylene diamine or oxidized
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**crosslinked** polysaccharide drug carrier)
IT 106096-93-9, Basic fibroblast growth factor
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked** polysaccharide drug carrier)
IT 9004-61-9, Hyaluronic acid
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(**crosslinked** polysaccharide drug carrier)
IT **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid
9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate
9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24967-94-0, Dermatan sulfate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked** polysaccharide drug carrier)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:900497 HCAPLUS
DOCUMENT NUMBER: 134:61577
TITLE: Biologically active material based on an insolubilized dextran derivative and a growth factor
INVENTOR(S): Blanchat, Cinderella; Logeart-avramoglou, Delphine; Petite, Herve; Meunier, Alain; Chaubet, Frederic; Jozefonvicz, Jacqueline; Jozefowicz, Marcel; Sedel, Laurent; Correia, Jose
PATENT ASSIGNEE(S): Iterfi, Fr.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076562	A1	20001221	WO 2000-FR1603	20000609
W: CA, JP, US				

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

FR 2794649	A1	20001215	FR 1999-7401	19990611
FR 2794649	B1	20030411		
EP 1189644	A1	20020327	EP 2000-940481	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2003501217	T2	20030114	JP 2001-502893	20000609
US 2002169120	A1	20021114	US 2001-16706	20011211

PRIORITY APPLN. INFO.: FR 1999-7401 A 19990611
WO 2000-FR1603 W 20000609

AB The invention concerns a biol. active material essentially comprising at least an insolubilized dextran deriv. of general formula DMCaBbSucSd and at least a growth factor having an activity on osteoarticular, dental and/or maxillofacial tissues, and the method for prepg. same. The invention also concerns the uses of said biomaterial for prepg. a repair or filling material, such as an implant, for osteoarticular, dental or maxillofacial applications and for prepg. an orthopedic, dental or maxillofacial prosthesis, and the prosthesis coated with said biol. active material. A hydrogel comprising dextran derivs. **crosslinked** with sodium trimetaphosphate and 0.5 ng/gel bone morphogenic protein was prepd. and lyophilized to obtain a powder. Thus, 15 mg of the above powder was rehydrated with 100 .mu.L water and used as a bone implant to fill a bone cavity of about 50 mm3.

IC ICM A61L027-54
ICS A61L027-22; A61L027-20; A61L027-26; A61L027-48; A61L027-46

CC 63-7 (Pharmaceuticals)

IT **Bone formation**
Coral
Crosslinking agents
Dental materials and appliances
Prosthetic materials and Prosthetics
Tooth
(biol. active material based on insolubilized dextran deriv. and growth factor)

IT **Bone morphogenetic proteins**
Growth factors, animal
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biol. active material based on insolubilized dextran deriv. and growth factor)

IT **Prosthetic materials and Prosthetics**
(implants; biol. active material based on insolubilized dextran deriv. and growth factor)

IT **Prosthetic materials and Prosthetics**
(orthopedic; biol. active material based on insolubilized dextran deriv. and growth factor)

IT 1306-06-5, Hydroxyapatite 7758-87-4, Tricalcium phosphate **9004-54-0D**, Dextran, derivs., biological studies 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid lactic acid copolymer
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biol. active material based on insolubilized dextran deriv. and growth factor)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:627957 HCAPLUS
DOCUMENT NUMBER: 133:187992
TITLE: Positive-charged cross-linked polysaccharides for scar reduction
INVENTOR(S): Gruskin, Elliott A.; Christoforou, Christopher T.
PATENT ASSIGNEE(S): United States Surgical Corp., USA
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000051566	A1	20000908	WO 2000-US5610	20000303
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6410519	B1	20020625	US 2000-519006	20000303
US 2003023209	A1	20030130	US 2002-58182	20020125

PRIORITY APPLN. INFO.: US 1999-122814P P 19990304
US 2000-519006 A1 20000303

AB A method of reducing scar formation at a wound site includes contacting the wound site with an effective scar reducing amt. of a cross-linked polysaccharide having a pos. charge and thereby reducing scar formation as the wound site heals. Such polysaccharide includes bioabsorbable cross-linked dextrans or alginates. The pos. charge may be provided by diethylaminoethyl (DEAE) moieties. The cross-linked polysaccharide can be applied to the wound site as a powder or bead. The cross-linked polysaccharide may also be contained in a compn. including a pharmaceutically acceptable vehicle. Biocompatible surgical devices are provided with an effective scar reducing amt. of a cross-linked polysaccharide having a pos. charge which reduce scar formation at healing wound sites. A method of reducing TGF-.beta. activity is also provided. Results of tests with DEAE-Sephadex beads are presented.

IC A61K009-14; A61K031-715; A61L017-10; A61L027-20
CC 1-12 (Pharmacology)
Section cross-reference(s): 63
ST pos charged **crosslinked** polysaccharide scar wound; dextran pos charged **crosslinked** scar wound; alginate pos charged **crosslinked** scar wound; diethylaminoethyl **crosslinked** polysaccharide scar wound; surgical device pos charged **crosslinked** polysaccharide scar; Sephadex DEAE scar wound; TGFbeta modulation pos charged **crosslinked** polysaccharide
IT **Prosthetic materials and Prosthetics**
(implants; pos.-charged cross-linked polysaccharides for scar redn.)
IT **Transforming growth factors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.beta.-; pos.-charged cross-linked polysaccharides for scar redn.)

IT **9004-54-0D**, Dextran, pos.-charged cross-linked, biological studies
9064-92-0, DEAE-Sephadex
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pos.-charged cross-linked polysaccharides for scar redn.)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:513547 HCAPLUS
DOCUMENT NUMBER: 133:125280
TITLE: Compositions and methods for controlled delivery of virus vectors
INVENTOR(S): Levy, Robert J.; Jones, Peter L.
PATENT ASSIGNEE(S): Children's Hospital of Philadelphia, USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000043044	A1	20000727	WO 2000-US1193	20000119

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-116405P P 19990119
AB The invention relates to compns. and methods for delivering a virus vector to an animal. The compns. include compns. which comprise a matrix having a virus vector bound at the exterior surface thereof in a physiol. reversible manner. The invention also includes methods of making such compns., including particles, devices, bulk materials, and other objects which comprise, consist of, or are coated with such compns. Methods of delivering a virus vector to an animal tissue are also described.
IC ICM A61K048-00
ICS C12N015-63; A61B019-00; C07H021-04
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 3
IT **Platelet-derived growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(-.beta.; compns. and methods for controlled delivery of virus vectors)
IT **Bone morphogenetic proteins**
Platelet-derived growth factors
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(compns. and methods for controlled delivery of virus vectors)

IT **Crosslinking** agents
(virus-binding; compns. and methods for controlled delivery of virus vectors)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(.beta.-; compns. and methods for controlled delivery of virus vectors)

IT 9002-06-6, Thymidine kinase 9002-64-6, Pth 9002-72-6, Somatotropin **61912-98-9**, Insulin like growth factor **62031-54-3**, Fgf 139639-23-9, Tissue plasminogen activator
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(compns. and methods for controlled delivery of virus vectors)

IT 97-90-5, Ethylene glycol dimethacrylate 108-05-4D, Vinyl acetate, copolymers 1306-06-5, Hydroxyapatite 6606-65-1 7440-06-4, Platinum, biological studies 7440-32-6, Titanium, biological studies 7758-87-4, Tricalcium phosphate 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-17-2, Polybutadiene 9003-18-3 9003-20-7, Vinyl acetate homopolymer 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9003-54-7, PolyStyrene acrylonitrile 9003-56-9 9004-35-7, Cellulose acetate 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid 9011-14-7, Polymethylmethacrylate 9012-36-6, Agarose 9016-80-2, Polymethylpentene 9017-21-4, Polymethylstyrene 9046-31-5, Polystyrene carboxylic acid 10586-17-1, Isopropyl cyanoacrylate 12597-68-1, Stainless steel, biological studies 15802-18-3D, polyalkyl derivs. 21982-30-9, Hydroxymethyl methacrylate 24937-78-8, Ethylene vinyl acetate copolymer 24980-41-4, Polycaprolactone 24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile 25068-26-2, Polymethylpentene 25087-26-7, Polymethacrylic acid 25102-52-7, Butadiene-isoprene copolymer 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid-lactic acid copolymer 50851-57-5, Polystyrene sulfonic acid 61128-18-5, Caprolactone glycolic acid copolymer
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-delivery matrix; compns. and methods for controlled delivery of virus vectors)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:141482 HCAPLUS
DOCUMENT NUMBER: 132:185482
TITLE: Malleable paste for filling bone defects
INVENTOR(S): Gertzman, Arthur A.; Sunwoo, Moon Hae
PATENT ASSIGNEE(S): Musculoskeletal Transplant Foundation, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6030635	A	20000229	US 1998-31750	19980227
US 6326018	B1	20011204	US 1999-413815	19991007
EP 1127581	A1	20010829	EP 2000-301370	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6437018	B1	20020820	US 2000-515656	20000229
US 6458375	B1	20021001	US 2000-677891	20001003

PRIORITY APPLN. INFO.: US 1998-31750 A3 19980227
US 1999-365880 B2 19990803
US 2000-515656 A2 20000229

AB The invention is directed toward a malleable bone putty and a flowable gel compn. for application to a bone defect site to promote new bone growth at the site which comprises a new bone growth inducing compd. of demineralized lyophilized allograft bone powder. The bone powder has a particle size ranging from about 100 to about 850 .mu. and is mixed in a high mol. wt. **hydrogel** carrier, the **hydrogel** component of the carrier ranging from 0.3 to 3.0% of the compn. and having a mol. wt. of about at least 10,000 Daltons. The compn. contains about 25% to about 40% bone powder and can be addnl. provided with BMP's and a sodium phosphate buffer. A malleable putty of 2% soln. hyaluronic acid in isotonic saline with 250-420 .mu. cortical allograft bone powder at 30%. **Freeze dried** cortical allograft bone (502 mg) of particle size ranging 250-420 .mu. was mixed into 1170 mg of a 2% soln. of sodium hyaluronate in isotonic saline. The bone component is added to achieve a bone concn. of 30% (wt./wt.). The soln. was well mixed and allowed to stand for 2-3 h at room temp. to provide a malleable putty with excellent formability properties.

IC ICM A61L025-00
ICS A61L015-64; A61K035-32
NCL 424423000
CC 63-7 (Pharmaceuticals)
IT Antibiotics
Antimicrobial agents
Bone formation
Particle size distribution
(malleable paste for filling bone defects)
IT **Bone morphogenetic proteins**
Enzymes, biological studies
Vitamins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(malleable paste for filling bone defects)
IT 56-75-7, Chloromycetin 57-92-1, biological studies 60-54-8, Tetracycline 69-53-4, Ampicillin 114-07-8, Erythromycin 1306-06-5, Hydroxylapatite (Ca5(OH)(PO4)3) 1403-66-3, Gentamicin 1404-04-2, Neomycin 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 1406-05-9, Penicillin 7440-70-2D, Calcium, salts, biological studies 7758-87-4, Calcium phosphate 7778-18-9 9001-12-1, Collagenase **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9012-76-4, Chitosan 9031-96-3, Peptidase 9035-73-8, Oxidase 9067-32-7, Sodium hyaluronate 10043-52-4, Calcium chloride (CaCl2), biological studies 18323-44-9, Clindamycin 25953-19-9, Cefazolin 32986-56-4 32988-50-4, Viomycin 104184-69-2, Azactam 106392-12-5, Pluronic 107043-88-9,

N,O-Carboxymethyl chitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(malleable paste for filling bone defects)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:686567 HCAPLUS
DOCUMENT NUMBER: 131:303417
TITLE: Collagen-polysaccharide matrix for bone and cartilage repair
INVENTOR(S): Liu, Linshu; Spiro, Robert
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. 5,866,165.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5972385	A	19991026	US 1998-7731	19980115
US 5866165	A	19990202	US 1997-783650	19970115
US 6309670	B1	20011030	US 1999-324792	19990603

PRIORITY APPLN. INFO.: US 1997-783650 A2 19970115
US 1998-7731 A2 19980115

AB A matrix and a method for prepg. it are provided to support the growth of tissue, such as bone, cartilage or soft tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to collagen. Collagen-hyaluronate conjugates were prepd. according to above method suing sodium periodate. Above conjugate matrix was implanted into a 5 mm by 3 mm defect created in the parietal bone of rats. All matrix-filled defects were completely radiodense after 28 days, with no distinctive defect borders, which indicated complete healing. Unfilled defects appeased as ovoid radiolucent areas with rounded corners, suggesting minimal healing.

IC ICM A61K038-39
ICS A61K009-10; A61K047-42; A61K047-36
NCL 424486000
CC 63-7 (Pharmaceuticals)
IT **Freeze drying**
Freezing
(collagen-polysaccharide matrix for bone and cartilage repair)
IT **Bone morphogenetic proteins**
Interleukins
Platelet-derived growth factors
Proteins, general, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for bone and cartilage repair)
IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(.beta.-; collagen-polysaccharide matrix for bone and cartilage repair)

IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 62683-29-8, Colony-stimulating factor 173247-99-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(collagen-polysaccharide matrix for bone and cartilage repair)

IT **9004-54-0DP**, Dextran, conjugates with with collagen, biological studies 9004-61-9DP, Hyaluronic acid, conjugates with with collagen 9005-32-7DP, Alginic acid, conjugates with with collagen 9007-28-7DP, Chondroitin sulfate, conjugates with with collagen 9042-14-2DP, Dextran sulfate, conjugates with with collagen 9050-30-0DP, Heparan sulfate, conjugates with with collagen 9056-36-4DP, Keratan sulfate, conjugates with with collagen 70226-44-7DP, Heparan, conjugates with with collagen
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(collagen-polysaccharide matrix for bone and cartilage repair)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:48632 HCAPLUS
DOCUMENT NUMBER: 130:100691
TITLE: **Crosslinked** polysaccharide drug carrier
INVENTOR(S): Spiro, Robert C.; Thompson, Andrea Y.; Liu, Linshu
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9901143	A1	19990114	WO 1998-US13997	19980701
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9882909	A1	19990125	AU 1998-82909	19980701
AU 752800	B2	20021003		
EP 1011690	A1	20000628	EP 1998-933196	19980701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
JP 2002509538	T2	20020326	JP 1999-507459	19980701
NZ 502134	A	20020328	NZ 1998-502134	19980701

PRIORITY APPLN. INFO.: US 1997-887994 A 19970703
WO 1998-US13997 W 19980701

AB A carrier and a method for prepg. it are provided for use in the delivery of therapeutic agents. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent oxime linkages with a

second polysaccharide and each of the first and second polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratan sulfate, heparan, heparan sulfate and alginate. Hyaluronic acid was treated with ethylenediamine and EDC to give a deriv., which was mixed with an oxidized hyaluronic acid to form a gel. BFGF was incorporated into the above gel.

IC ICM A61K031-715
ICS A61K009-14

CC 63-6 (Pharmaceuticals)

ST **crosslinked** polysaccharide biodegradable carrier; hyaluronate **crosslinked** gel bFGF implant

IT Drug delivery systems
(carriers; **crosslinked** polysaccharide drug carriers)

IT **Bone formation**
(**crosslinked** polysaccharide drug carriers)

IT Polysaccharides, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**crosslinked** polysaccharide drug carriers)

IT Cytokines
DNA
Growth factors, animal
Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked** polysaccharide drug carriers)

IT Drug delivery systems
(implants; **crosslinked** polysaccharide drug carriers)

IT **9004-54-0D**, Dextran, derivs., **crosslinked**, biological studies 9005-32-7D, Alginic acid, derivs., **crosslinked** 9005-49-6D, Heparin, derivs., **crosslinked**, biological studies 9042-14-2D, Dextran sulfate, derivs., **crosslinked** 9050-30-0D, Heparan sulfate, derivs., **crosslinked** 9056-36-4D, Keratan sulfate, derivs., **crosslinked** 24967-94-0D, Dermatan sulfate, derivs., **crosslinked** **62031-54-3**, Fibroblast growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked** polysaccharide drug carriers)

IT 9004-61-9, Hyaluronic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **crosslinked** polysaccharide drug carriers)

IT 9004-61-9DP, Hyaluronic acid, derivs., **crosslinked** 9007-28-7DP, Chondroitin sulfate, derivs., **crosslinked** with hyaluronate
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **crosslinked** polysaccharide drug carriers)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:544101 HCAPLUS
DOCUMENT NUMBER: 125:177462
TITLE: Surface-modified nanoparticles and method of making and using them
INVENTOR(S): Levy, Robert J.; Labhasetwar, Vinod; Song, Cunxian S.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 170 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9620698	A2	19960711	WO 1996-US476	19960104
WO 9620698	A3	19980122		
W: AL, AM, AT, AU, CA, CH, CN, CZ, DE, DK, GB, HU, IS, JP, KE, LU, VN, MN, NO, US				
RW: KE, LS, SD, AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, PT, SE, NL, MR, NE, SN				
CA 2207961	AA	19960711	CA 1996-2207961	19960104
AU 9647556	A1	19960724	AU 1996-47556	19960104
EP 805678	A1	19971112	EP 1996-903476	19960104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 10511957	T2	19981117	JP 1996-521279	19960104

PRIORITY APPLN. INFO.: US 1995-369541 19950105
US 1995-389893 19950216
WO 1996-US476 19960104

AB Biodegradable controlled-release nanoparticles as sustained release bioactive agent delivery vehicles include surface modifying agents to target binding of the nanoparticles to tissues or cells of living systems, to enhance nanoparticle sustained release properties, and to protect nanoparticle-incorporated bioactive agents. Unique methods of making small (10 nm to 15 nm, and preferably 20 nm to 35 nm) nanoparticles having a narrow size distribution which can be surface-modified after the nanoparticles are formed is described. Techniques for modifying the surface include a lyophilization technique to produce a phys. adsorbed coating and epoxy-derivatization to functionalize the surface of the nanoparticles to covalently bind mols. of interest. The nanoparticles may also comprise hydroxy-terminated or epoxide-terminated and/or activated multiblock copolymers, having hydrophobic segments which may be polycaprolactone and hydrophilic segments. The nanoparticles are useful for local intravascular administration of smooth muscle inhibitors and antithrombogenic agents as part of interventional cardiac or vascular catheterization such as a balloon angioplasty procedure; direct application to tissues and/or cells for gene therapy, such as the delivery of osteotropic genes or gene segments into bone progenitor cells; or oral administration in an enteric capsule for delivery of protein/peptide based vaccines.

IC A61K009-51
CC 63-6 (Pharmaceuticals)
IT **Animal growth regulators**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; surface-modified polymer controlled-release nanoparticles for sustained drug delivery)
IT Alkylating agents, biological
Antibiotics
Anticoagulants and Antithrombotics
Emulsifying agents
Encapsulation
Freeze drying
Immunosuppressants
Inflammation inhibitors

Neoplasm inhibitors
Sound and Ultrasound
Surfactants
Thrombolytics
Vaccines
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Dental materials and appliances**
(adhesives, surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**blood platelet-derived growth factors,** surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**bone morphogenetic proteins,** surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**transforming growth factors,** surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT **62229-50-9,** Epidermal growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(heparin-binding, -like compds.; surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT 50-70-4, D-Glucitol, biological studies 57-09-0, Cetyl trimethyl ammonium bromide 57-10-3, Hexadecanoic acid, biological studies 57-88-5, Cholesterol, biological studies 69-65-8, D-Mannitol 102-71-6, Triethanolamine, biological studies 112-02-7, Hexadecyl trimethyl ammonium chloride 151-21-3, Sodium dodecyl sulfate, biological studies 577-11-7, Sodium dioctyl sulfosuccinate 1069-55-2, Isobutyl cyanoacrylate 3282-73-3, Didodecyldimethyl ammonium bromide 7445-62-7 7727-43-7, Barium sulfate 8007-43-0, Sorbitan sesquioleate 9000-65-1, Tragacanth 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9002-92-0, Polyoxyethylene lauryl ether 9003-39-8, Polyvinyl pyrrolidone 9003-53-6, Polystyrene 9004-32-4 9004-34-6, Cellulose, biological studies 9004-35-7, Cellulose acetate 9004-44-8, Cellulose phthalate 9004-64-2, Hydroxypropyl cellulose 9004-99-3 9005-49-6, Heparin, biological studies **9015-73-0** 9050-04-8, CM-cellulose calcium 9050-31-1, Hydroxypropyl methyl cellulose phthalate 10103-46-5, Calcium phosphate 25322-68-3 106392-12-5, Poloxamer 110617-70-4, Poloxamine 128835-92-7, Lipofectin 180741-27-9
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

IT 50-02-2, Dexamethasone 59-52-9 60-00-4, EDTA, biological studies 60-10-6, Dithizone 77-86-1 77-92-9, biological studies 87-69-4, biological studies 92-84-2D, Phenothiazine, derivs. 102-71-6D, Triethanolamine, fatty acid esters 139-13-9 144-62-7, Ethanedioic acid, biological studies 1306-06-5, Hydroxyapatite 1338-39-2, Span 20 2462-63-7 9000-01-5, Acacia gum 9003-05-8, Polyacrylamide **9004-54-0,** Dextran, biological studies 9005-25-8, Starch,

biological studies 9005-32-7, Alginic acid 9012-76-4, Chitosan 10102-43-9D, Nitric oxide, compds. 11128-99-7, Angiotensin II 14930-96-2, Cytochalasin B **61912-98-9**, Insulin-like growth factor 81845-44-5, Ciprostene 106096-92-8, Acidic fibroblast growth factor 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 122647-31-8, Ibutilide 130736-65-1, U 86983
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

L51 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:358762 HCAPLUS
DOCUMENT NUMBER: 122:170268
TITLE: Biocompatible implants carrying cells using a retroviral expression vector for use in the manufacture and secretion of therapeutic compounds
INVENTOR(S): Moullier, Philippe; Danos, Olivier; Heard, Jean-Michel; Ferry, Nicolas
PATENT ASSIGNEE(S): Institut Pasteur, Fr.
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9424298	A1	19941027	WO 1994-FR456	19940421
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2704236	A1	19941028	FR 1993-4700	19930421
FR 2704236	B1	19950623		
FR 2708202	A1	19950203	FR 1993-9185	19930726
FR 2708202	B1	19960329		
AU 9466812	A1	19941108	AU 1994-66812	19940421
AU 688321	B2	19980312		
EP 702723	A1	19960327	EP 1994-914431	19940421
EP 702723	B1	20020904		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08508880	T2	19960924	JP 1994-522856	19940421
EP 1231277	A2	20020814	EP 2002-3797	19940421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 223493	E	20020915	AT 1994-914431	19940421
ES 2181717	T3	20030301	ES 1994-914431	19940421
US 5906817	A	19990525	US 1996-532814	19960119
AU 9859675	A1	19980604	AU 1998-59675	19980330
AU 704371	B2	19990422		
US 6326195	B1	20011204	US 1999-225509	19990106
US 2002098223	A1	20020725	US 2001-987601	20011115

PRIORITY APPLN. INFO.:		
FR 1993-4700	A	19930421
FR 1993-9185	A	19930726
EP 1994-914431	A3	19940421
WO 1994-FR456	W	19940421
US 1996-532814	A3	19960119
US 1999-225509	A3	19990106

AB Neo-organ implants for use preferably in the peritoneal cavity of the

recipient are described for use in the in situ synthesis and secretion of a therapeutic compd. The implant includes a biocompatible support for anchoring of cells that can secrete a therapeutic compd. embedded in a collagen gel. The cells may naturally synthesize the compd. or they may be transformed with a novel retrovirus expression vector from which the gag, pol, and env genes have been deleted to prevent viral replication. Fibroblasts transformed with a Moloney murine leukemia virus-based expression vector (M48) carrying .beta.-glucuronidase gene under control of the PGK promoter were immobilized on collagen-coated PTFE fibers and incorporated into a collagen gel in the presence of basic fibroblast growth factor. The implant was then introduced into the peritoneal cavity by attachment to the arms of the intestine in contact with the mesentery; the implant did not give rise to an inflammatory response. In animals showing a genetic .beta.-glucuronidase deficiency the implants caused a rapid fall in urinary secretion of intermediates from the catabolism of mucopolysaccharides and a spectacular normalization of the histol. of the liver and spleen.

IC ICM C12N015-86
ICS A61K048-00; C12N005-10; A61L027-00; A61K009-14; C12N009-24; C12N015-27; C12N009-12; C12N015-12; C12N015-56; C12N015-54

CC 63-7 (Pharmaceuticals)

IT **Animal growth regulators**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(angiogenic factors, as angiogenic factor in implants contg. transgenic cells; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

IT Collagens, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**crosslinked**, as substrate for immobilization of cells for implants; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

IT **Prosthetic materials and Prosthetics**
(implants, biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

IT 9002-84-0, PTFE **9004-54-0**, Dextran, biological studies
9004-61-9, Hyaluronic acid
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as substrate for immobilization of cells for implants; biocompatible implants carrying cells using a retroviral expression vector for use in the manuf. and secretion of therapeutic compds.)

L51 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:91479 HCAPLUS
DOCUMENT NUMBER: 116:91479
TITLE: Surgical implant and method incorporating chemotherapeutic agents
INVENTOR(S): Jernberg, Gary R.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9117744	A1	19911128	WO 1991-US2784	19910423
W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
CA 2082398	AA	19911115	CA 1991-2082398	19910423
AU 9179096	A1	19911210	AU 1991-79096	19910423
EP 528971	A1	19930303	EP 1991-910569	19910423
EP 528971	B1	19990901		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5290271	A	19940301	US 1993-99265	19930729
PRIORITY APPLN. INFO.:			US 1990-523067	19900514
			US 1990-599699	19901018
			WO 1991-US2784	19910423
			US 1992-899096	19920615

AB A surgical implant which provides controlled release and improved cellular uptake of chemotherapeutic agents over a predetd. period of time, is prepd. by incorporating time-release microshapes encapsulating .gtoreq.1 chemotherapeutic agent and carrier agents into a biocompatible implant. The implant can be a vascular graft, heart valve leaflet, artificial skin, etc.

IC ICM A61K009-22
ICS A61K009-52; A61L027-00

CC 63-7 (Pharmaceuticals)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**bone morphogenetic protein**, surgical implants contg. microencapsulated)

IT Collagens, compounds
RL: BIOL (Biological study)
(**crosslinked**, prosthetic implant manuf. from, chemotherapeutic agent-encapsulated microspheres incorporation in)

IT **Prosthetic materials and Prosthetics**
(implants, microencapsulated chemotherapeutics in)

IT **Prosthetic materials and Prosthetics**
(implants, vascular, microencapsulated chemotherapeutics in)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 53-06-5, Cortisone 53-86-1, Indomethacin 60-54-8, Tetracycline 114-07-8, Erythromycin 378-44-9, .beta.-Methasone 443-48-1, Metronidazole 644-62-2, Meclofenamic acid 1404-04-2, Neomycin 1404-90-6, Vancomycin 1406-05-9, Penicillin 5104-49-4 8063-07-8, Kanamycin **9004-54-0**, Dextran, biological studies 9005-49-6, Heparin, biological studies 11111-12-9, Cephalosporin 15687-27-1, Ibuprofen 22204-53-1, Naproxen 35121-78-9, Prostacyclin
RL: BIOL (Biological study)
(surgical implants contg. microencapsulated)

```
=> d que
L7         13610 SEA FILE=HCAPLUS ABB=ON  PLU=ON  DEXTRAN+NT/CT
L11        31790 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "GROWTH FACTORS, ANIMAL"+OLD/C
                 T
L14        24623 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                 PROSTHETICS"+OLD/CT
L15         4540 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BONE FORMATION/CT
L16         3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                 OLD,NT/CT
L17        20049 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "DENTAL MATERIALS AND
                 APPLIANCES"+OLD/CT
L18          117 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PROSTHETIC MATERIALS AND
                 PROSTHETICS (L) MAXILLOFACIAL"/CT
L24        17023 SEA FILE=HCAPLUS ABB=ON  PLU=ON  EPIDERMAL GROWTH FACTOR/CT
L25        18840 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "INSULIN-LIKE GROWTH FACTOR"+N
                 T/CT
L26         3481 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "FIBROBLAST GROWTH FACTOR"/CT

L27        21413 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "TRANSFORMING GROWTH FACTORS"+
                 OLD,NT/CT
L28         8044 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLATELET-DERIVED GROWTH
                 FACTORS"+OLD,NT/CT
L29         3800 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "BONE MORPHOGENETIC PROTEINS"+
                 OLD,NT/CT
L30           51 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L24 OR L25 OR L26 OR L27 OR
                 L28 OR L29) OR L11) AND L7 AND (L14 OR L15 OR L16 OR L17 OR
                 L18)
L45            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND CROSSLINK?
L47            6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (FREEZEDR? OR FREEZE
                 DR?)
L49            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 AND HYDROGEL?
L51           15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L45 OR L47 OR L49
L52           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (CORAL OR HYDROXYAPATI
                 TE OR TRICALCIC CALCIUM PHOSPHATE OR CALCIUM SULFATE OR
                 CALCIUM CARBONATE)
L53           13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 NOT L51

=> d ibib ab hitind l53 1-13

L53  ANSWER 1 OF 13  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:300930  HCAPLUS
TITLE:                    Improved bone graft
INVENTOR(S):              Knaack, David; Traianedes, Kathy; Diegman, Michele;
                          Forsyth, Nanette; Winterbottom, John
PATENT ASSIGNEE(S):       Osteotech, Inc., USA
SOURCE:                   PCT Int. Appl., 87 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     WO 2003030956      A2   20030417      WO 2002-US32941  20021015
```

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-329156P P 20011012
US 2002-392462P P 20020627

AB An improved demineralized bone matrix (DBM) or other matrix compn. is provided that has been mixed with a stabilizing agent that acts as (1) a diffusion barrier, (2) a enzyme inhibitor, (3) a competitive substrate, or (4) a masking moiety. A diffusion barrier acts as a barrier so as to protect the osteoinductive factors found in DBM from being degraded by proteolytic and glycolytic enzymes at the implantation site. Stabilizing agents may be any biodegradable material such as starches, modified starches, cellulose, dextran, polymers, proteins, and collagen. As the stabilizing agents degrades or dissolves in vivo, the osteoinductive factors such as TGF-.beta., BMP, and IGF are activated or exposed, and the activated factors work to recruit cells from the perivascular space to the site of injury and to cause differentiation into bone-forming cells. The invention also provides methods of prepg., testing, and using the inventive improved osteoinductive matrix compns.

IC ICM A61L027-00
CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 9
IT INDEXING IN PROGRESS
IT Alkylating agents, biological
Antibiotics
Antitumor agents
Bone formation
Diffusion barrier
Drug delivery systems
Milling (size reduction)
Nutrients
Particle size distribution
Stabilizing agents
Virus
Wound healing promoters
(improved bone graft comprising a demineralized bone matrix)
IT Agglutinins and Lectins
Alkyl iodides
Angiogenic factors
Antibodies
Biopolymers
Bone morphogenetic proteins
Fatty acids
Lipids
Phosphatidylcholines
Polyesters
Polyethers
Polymers
Polysaccharides
Proteins

Transforming growth factors
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved bone graft comprising a demineralized bone matrix)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(improved bone graft comprising a demineralized bone matrix)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved bone graft comprising a demineralized bone matrix)

IT **Growth factors, animal**
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(osteogenins; improved bone graft comprising a demineralized bone matrix)

IT 1306-06-5, **Hydroxyapatite** 7758-87-4, Tricalcium phosphate 7778-18-9, **Calcium sulfate** 10103-46-5, Calcium phosphate 13767-12-9, Tetracalcium phosphate
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ceramics; improved bone graft comprising a demineralized bone matrix)

IT 50-01-1, Guanidine hydrochloride 64-69-7, Iodoacetic acid 74-88-4, Methyl iodide 3483-12-3, Dithiothreitol 9000-94-6, Antithrombin iii 9002-89-5, Polyvinyl alcohol 9003-16-1, polyfumaric acid 9004-34-6, Cellulose **9004-54-0**, Dextran 9005-25-8, starch 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Lactic acid-glycolic acid copolymer **61912-98-9**, Igf 81627-83-0, Mcsf
RL: DEV (Device component use); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improved bone graft comprising a demineralized bone matrix)

L53 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:282718 HCAPLUS
DOCUMENT NUMBER: 138:282352
TITLE: Traversal of nucleic acid molecules through a tissue fluid space and expression in repair cells
INVENTOR(S): Sosnowski, Barbara A.; Pierce, Glenn
PATENT ASSIGNEE(S): Selective Genetics, Inc., USA
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029429	A2	20030410	WO 2002-US31546	20021002

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,

UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-327513P P 20011003

AB Disclosed are methods for use in transferring nucleic acids into cells at a wound site assocd. with a fluid space. These gene transfer protocols are suitable for use in transferring various nucleic acids into cartilage, cardiac muscle, and other tissues, and have many uses including treating diseases such as arthritis and ischemic heart disease, and promoting wound healing. The invention further disclosed pharmaceutical compns. that may be used in the practice of the invention to transfer the nucleic acid of interest. Such compns. include any multi-partitioned biocompatible matrix in combination with multiple nucleic acids of interest. Thus, collagen collagen-immobilized fibroblast growth factor (FGF) genes induce angiogenesis in vitro, and FGF gene delivery to skeletal muscle wounds induces both angiogenesis and arteriogenesis and well as induces myocyte regeneration.

IC ICM C12N
CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(10, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(6, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(8, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(9, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Prosthetic materials and Prosthetics**
(bioactive glass, biocompatible; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chondromodulins, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT Angiogenesis
Bone formation
Regeneration, animal
Wound healing
(gene therapy for stimulation of; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding BMP-12; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding BMP-13; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT Antibodies
Bone morphogenetic proteins
Growth factor receptors
Growth factors, animal
Hepatocyte growth factor
Hormones, animal, biological studies
Insulin-like growth factor receptors
Interleukin 1
Interleukin 6
Interleukin 8
Interleukins
Leukemia inhibitory factor
Platelet-derived growth factors
Transcription factors
Transforming growth factors
Tumor necrosis factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(skeletal growth factors, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in

repair cells)

IT **Transforming growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.2-, gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT 1306-06-5, **Hydroxyapatite** 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-20-7, Polyvinylacetate 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronan 9004-67-5, Methyl cellulose 9005-32-7, Alginic acid 9012-76-4, Chitosan 9016-00-6, Poly(dimethylsiloxane) 11098-82-1, Aluminate 24937-78-8, Poly(ethylene-vinyl acetate) 25322-68-3, Polyethylene glycol 25852-47-5, Hydrogel 26100-51-6, Lactic acid polymer 26124-68-5, Glycolic acid polymer 31900-57-9, Poly(dimethylsiloxane) 34346-01-5, Lactic acid-Glycolic acid copolymer 124586-38-5, Hydrogel
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biocompatible; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

IT 9001-27-8, Blood-coagulation factor VIII 9001-28-9, Blood-coagulation factor IX 9002-64-6, Parathyroid hormone 9002-72-6, Growth hormone 11096-26-7, Erythropoietin 57285-09-3, Inhibin **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor **62229-50-9**, Epidermal growth factor **67763-96-6**, Insulin-like growth factor I **67763-97-7**, Insulin-like growth factor II 81627-83-0, Macrophage-colony stimulating factor 83869-56-1, Granulocyte-macrophage-colony stimulating factor 103370-86-1, Parathyroid hormone-related peptide 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 127464-60-2, Vascular endothelial growth factor 139639-23-9, Tissue plasminogen activator 189460-40-0, Connective tissue-growth factor 252959-51-6, Growth differentiation factor 11
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy with nucleic acids encoding; traversal of nucleic acid mols. through a tissue fluid space and expression in repair cells)

L53 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:906235 HCAPLUS
DOCUMENT NUMBER: 136:25166
TITLE: Method for composite cell-based implants using mineral or polymeric microcarriers
INVENTOR(S): Frondoza, Carmelita G.; Hungerford, David S.; Shikani, Alan H.; Domb, Abraham J.; Fink, David J.; Bloom, Leonard
PATENT ASSIGNEE(S): Chondros, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U. S. Ser. No. 825,632.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2001051834	A1	20011213	US 2001-922909	20010806
US 2001014475	A1	20010816	US 2001-825632	20010404
US 2002012705	A1	20020131	US 2001-929697	20010814
US 6514522	B2	20030204		
US 2002123142	A1	20020905	US 2002-39718	20020103

PRIORITY APPLN. INFO.:

US 1998-81016P	P	19980408
US 1998-104842P	P	19981020
US 1999-275319	A2	19990324
US 2000-712662	A2	20001114
US 2001-825632	A2	20010404
US 1999-165608P	P	19991115
US 2000-228855P	P	20000829

AB This invention is a method for the implantation of a combination of cells or cell-microcarrier aggregates wherein one component comprises a solid implantable construct and a second component comprises an injectable formulation. For example, in one embodiment, the solid implant may be first implanted to fill the majority of the cavity receiving the implant, and then cells or cell-microcarrier aggregates in an injectable format, with or without the addn. of gelling materials to promote rapid gelling in situ, may be injected into spaces surrounding the solid implant in order to secure the solid implant in the site and/or to promote rapid adherence and/or integration of the solid implant to surrounding tissues. Also contemplated in this embodiment is that the cellular compn. of the injectable component may differ from that of the solid component. For example, the solid implant may result from the culturing of chondrocytes on microcarriers or scaffolds, e.g., **calcium carbonate**, calcium phosphate or **calcium sulfate**, biopolymers, or synthetic polymers such as polylactic acid, polyglycolic or their copolymers, thereby resulting in an implant having cartilage-like properties, whereas the injectable cells or aggregates may result from the culturing of stem cells, resulting thereby in cells capable of producing cells of a chondrogenic, fibroblastic, myoblastic or osteoblastic phenotype. In this example, cells in the injectable aggregates may promote the fixation to or rapid integration of the solid cartilage implant into surrounding cartilage, connective tissue, muscle or bone, resp. A method of treating a skin lesion or nose or ear defects comprises filling the lesion or defect with a solid cell-contg. implant along with an injectable cell-contg. formulation.

IC ICM A61F002-02
ICS A61F002-28

NCL 623023720

CC 63-7 (Pharmaceuticals)

IT Antibodies
Bone morphogenetic proteins
Cytokines
Growth factors, animal
Integrins
Interleukins
Lymphotoxin
Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluid medium for injection contg.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

IT **Prosthetic materials and Prosthetics**
(implants; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

IT **62031-54-3**, Fibroblast growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluid medium for injection contg.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

IT 471-34-1, **Calcium carbonate**, biological studies
1398-61-4, Chitin 7778-18-9, **Calcium sulfate**
9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Poly(acrylic acid)
9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-35-0, Calcium alginate 9012-36-6, Agarose 9012-76-4, Chitosan 10103-46-5, Calcium phosphate 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 34346-01-5, Glycolic acid-lactic acid copolymer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microcarriers or scaffolds; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

L53 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:618469 HCAPLUS
DOCUMENT NUMBER: 135:170821
TITLE: Osteogenic devices and methods of use thereof for repair of endochondral bone and osteochondral and chondral defects
INVENTOR(S): Rueger, David C.; Tucker, Marjorie A.; Chang, An-Cheng
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 59 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001016646	A1	20010823	US 1998-45331	19980320

PRIORITY APPLN. INFO.: US 1998-45331 19980320

AB Disclosed herein are improved osteogenic devices and methods of use thereof for repair of bone and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less osteogenic protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to: crit. size defects, non-crit. size defects, non-union fractures, fractures, osteochondral defects, subchondral defects, and defects resulting from degenerative diseases such as osteochondritis dissecans.

IC ICM C07K001-00
ICS C07K014-00; C07K017-00; A01N025-34; G01N033-53
NCL 530840000
CC 63-7 (Pharmaceuticals)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(10; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(11; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(12; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(15; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(16; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(3; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(4; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(5; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(6; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(7; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Bone morphogenetic proteins**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU

(Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(9; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT Binders
Bone formation
Protein sequences
Wetting agents
cDNA sequences
(osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Growth factors, animal**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(osteogenic protein 2; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT **Growth factors, animal**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(osteogenic protein 3; osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT 69-65-8, mannitol 9004-32-4, carboxymethylcellulose 9004-34-6D, cellulose, alkyl derivs., biological studies **9004-54-0**, dextran, biological studies 9004-62-0, Hydroxyethylcellulose 9004-65-3, hydroxypropylmethylcellulose 9004-67-5, methylcellulose 9032-42-2, methylhydroxyethylcellulose
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

IT 1306-06-5, **hydroxyapatite** 7758-87-4, tricalcium phosphate
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(osteogenic devices for repair of endochondral bone and osteochondral and chondral defects)

L53 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:581931 HCAPLUS
DOCUMENT NUMBER: 135:157661
TITLE: Extraction of growth factors from tissue
INVENTOR(S): Donda, Russell S.; Wironen, John F.; Seid, Christopher
PATENT ASSIGNEE(S): Regeneration Technologies, Inc., USA
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001057082	A2	20010809	WO 2001-US3474	20010202
WO 2001057082	A3	20020221		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,

CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2001041792 A1 20011115 US 2001-776619 20010202
PRIORITY APPLN. INFO.: US 2000-180067P P 20000203
US 2000-200842P P 20000501
US 2000-215912P P 20000703

AB Diclosed are novel methods of obtaining osteogenic and other growth factor compns. from alternative nonbone sources such as tissue or bone marrow, and methods of using the same. Also disclosed are implants infused with growth factors obtained from the methods. An example is given of extn. of growth factors from platelets.

IC ICM C07K014-475

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 2

IT **Prosthetic materials and Prosthetics**
(bioactive glass; extn. of growth factors from tissue)

IT **Prosthetic materials and Prosthetics**
(ceramics; extn. of growth factors from tissue)

IT **Platelet-derived growth factors**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(extn. of growth factors from tissue)

IT **Growth factors, animal**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(extn. of growth factors from tissue)

IT **Prosthetic materials and Prosthetics**
(implants; extn. of growth factors from tissue)

IT Angiogenic factors
Bone morphogenetic proteins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(platelet-derived; extn. of growth factors from tissue)

IT 50-01-1, Guanidine hydrochloride 56-81-5, Glycerol, processes 57-13-6, Urea, processes 151-21-3, Sodium dodecyl sulfate, processes 9002-93-1, Triton x100 9004-34-6, Cellulose, processes **9004-54-0**, Dextran, processes 9004-61-9, Hyaluronic acid 9005-80-5, Inulin 9012-36-6, Agarose 9037-22-3, Amylopectin 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 106392-12-5, pluronic F127
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(extn. of growth factors from tissue)

IT 1306-06-5, **Hydroxyapatite** 7758-87-4, Tricalcium phosphate 7778-18-9, **Calcium sulfate** 10103-46-5, Calcium phosphate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extn. of growth factors from tissue)

IT **62229-50-9P**, egf
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)
(platelet-derived; extn. of growth factors from tissue)

L53 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:489907 HCAPLUS
DOCUMENT NUMBER: 135:81959
TITLE: Gene transfer to intervertebral disc cells, and use in the treatment of degenerative disk disorders, and animal model for degenerative disk disease
INVENTOR(S): Kang, James D.; Evans, Christopher H.; Nishida, Kotaro; Robbins, Paul D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001006948	A1	20010705	US 1998-199978	19981125

PRIORITY APPLN. INFO.: US 1998-199978 19981125

AB Methods for transferring a gene to an intervertebral disk are disclosed. The methods find application in the treatment of patients for degenerative disk disorders, by use of a gene encoding a product that imparts a therapeutic and/or prophylactic benefit. The methods also find application in the establishment of an animal model for the study of degenerative disk disease. A genetically modified intervertebral disk cell is also disclosed.

IC ICM A61K048-00
NCL 514044000
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 14

IT **Bone morphogenetic proteins**
Growth factors, animal
Interleukin 1 receptor antagonist
Transforming growth factors
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **Transforming growth factors**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.1-; gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fibroblast growth factor 86102-31-0, Tissue inhibitor of metalloproteinase 96282-35-8 105844-41-5, Plasminogen activator inhibitor
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT 1306-06-5, **Hydroxyapatite** 7758-87-4, Tricalcium phosphate 7778-18-9, **Calcium sulfate** 9012-76-4, Chitosan 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

IT **9015-73-0** 10103-46-5, Calcium phosphate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene transfer to intervertebral disk cells, and use in treatment of degenerative disk disorders, and animal model for degenerative disk disease)

L53 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:472523 HCAPLUS
DOCUMENT NUMBER: 135:66255
TITLE: Liquid composition of a biodegradable block copolymer for drug delivery system
INVENTOR(S): Seo, Min-hyo; Choi, In-ja
PATENT ASSIGNEE(S): Samyang Corp., S. Korea
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001045742	A1	20010628	WO 2000-KR1508	20001221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1244471	A1	20021002	EP 2000-989005	20001221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003082234	A1	20030501	US 2002-169012	20020622

PRIORITY APPLN. INFO.: KR 1999-60349 A 19991222
WO 2000-KR1508 W 20001221

AB The present invention relates to a liq. polymeric compn. capable of forming a physiol. active substance-contg. implant when it is injected into a living body and a method of prepn. The compn. comprises a water-sol. biocompatible liq. polyethylene glycol deriv., a biodegradable block copolymer which is insol. in water but sol. in the water-sol. biocompatible liq. polyethylene glycol deriv. and a physiol. active substance. Thus, a triblock copolymer was prepd. from lactide-1,4-dioxanone and PEG. Piroxicam 150, the above biodegradable block copolymer 400, diacetyl polyethylene glycol 420, and gelatin 30 mg were dissolved in a 50% aq. HOAc soln. and the drug-contg. liq. polymeric compn. was filtered and the org. solvent was removed.

IC ICM A61K047-30

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 37

IT **Bone morphogenetic proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT **Platelet-derived growth factors**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT 50-70-4, Sorbitol, biological studies 50-76-0, Actinomycin-D 50-78-2, Aspirin 50-99-7, Glucose, biological studies 51-21-8, 5-Fluorouracil 53-86-1, Indomethacin 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 59-01-8, Kanamycin 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 60-54-8, Tetracycline 63-42-3, Lactose 69-53-4, Ampicillin 69-65-8, Mannitol 87-79-6, Sorbose 87-99-0, Xylitol 99-20-7, Trehalose 103-90-2, Acetaminophen 114-07-8, Erythromycin 151-21-3, Sodium dodecylsulfate, biological studies 471-34-1, **Calcium carbonate**, biological studies 557-34-6, Zinc acetate 564-25-0, Doxycycline 1066-17-7, colistin 1309-42-8, Magnesium hydroxide 1314-13-2, Zinc oxide, biological studies 1403-66-3, Gentamycin 1404-00-8, Mitomycin 1404-04-2, Neomycin 1404-90-6, Vancomycin 1405-87-4, bacitracin 1406-05-9, Penicillin 1407-47-2, angiotensin 3486-35-9, Zinc carbonate 5104-49-4, Flurbiprofen 6990-06-3, Fusidic acid 7446-70-0, Aluminum chloride, biological studies 7542-37-2, Paromomycin 7646-85-7, Zinc chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 9001-63-2, Lysozyme 9002-72-6, Somatotropin 9003-39-8, Polyvinylpyrrolidone 9004-10-8, insulin, biological studies 9004-32-4, Sodium carboxymethyl cellulose **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9007-12-9, calcitonin 9007-92-5, glucagon, biological studies 9012-76-4, Chitosan 9034-39-3, growth hormone releasing factor 9034-40-6, LHRH 9061-61-4, nerve growth factor 10043-52-4, Calcium chloride, biological studies 10118-90-8, Minocycline 11056-06-7, Bleomycin 11096-26-7, erythropoietin 11111-12-9, Cephalosporin 12619-70-4, Cyclodextrin 13614-98-7, Minocycline hydrochloride 15307-79-6, Diclofenac sodium 15307-86-5, Diclofenac 15663-27-1, Cisplatin 15687-27-1, Ibuprofen 16039-53-5, Zinc lactate 20830-81-3, Daunorubicin 21645-51-2, Aluminum hydroxide, biological studies 22071-15-4, Ketoprofen 22204-53-1, Naproxen 23155-02-4, Phosphomycin 23214-92-8, Doxorubicin 24305-27-9, thyrotropin releasing hormone 25316-40-9, Adriamycin 25322-68-3D, alkyl ethers 25496-72-4, Glyceryl monooleate 29679-58-1, Fenoprofen 31566-31-1, Glyceryl monostearate 32986-56-4, Tobramycin 33069-62-4, Paclitaxel 34493-98-6, Dibekacin 36322-90-4, Piroxicam 37517-28-5, Amikacin 40828-46-4, Suprofen 41575-94-4, Carboplatin 51110-01-1, somatostatin 52093-21-7,

Micronomicin 53994-73-3, Cephaclor 58957-92-9, Idarubicin 59804-37-4, Tenoxicam 59995-64-1, Thienamycin 60118-07-2, endorphin **62229-50-9**, EGF 63527-52-6 64221-86-9, Imipenem 68767-14-6, Loxoprofen 74011-58-8, Enoxacin 81627-83-0, M-CSF 82419-36-1, Ofloxacin 85721-33-1, Ciprofloxacin 86090-08-6, angiostatin 100986-85-4, Levofloxacin 106392-12-5, Poloxamer 114977-28-5, Taxotere 126467-48-9, porcine growth hormone 143011-72-7, GCSF 187888-07-9, endostatin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:416980 HCAPLUS
DOCUMENT NUMBER: 135:15095
TITLE: In situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy
INVENTOR(S): Pierce, Glenn; Chandler, Lois Ann
PATENT ASSIGNEE(S): Selective Genetics, Inc., USA
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040272	A2	20010607	WO 2000-US32754	20001130
WO 2001040272	A3	20020117		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2001044413	A1	20011122	US 2000-729644	20001130

PRIORITY APPLN. INFO.: US 1999-168470P P 19991201
AB The present invention relates to a method of in vivo, sustained gene therapy wherein one or more in situ bioreactors (or neo-organoids) express systematically available bioactive agents. One method involves implanting or placing into a tissue site a biocompatible substance capable of cellular ingrowth (e.g., device, matrix, semi-permeable membrane with a matrix or liq. interior, etc.). and systemic delivery of a bioactive factor. Also provided are compns., devices, and kits comprising the same. In various embodiments the biocompatible substance comprises a matrix and at least one nucleic acid mol. encoding a bioactive agent. In other embodiments bioreactors are provided wherein a first gene that encodes a growth factor is present and a second gene encoding a bioactive agent is present during manuf. or provided to the bioreactor following manuf. or implantation.
IC ICM C07K014-00

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 9, 63

IT **Platelet-derived growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PDGF-B, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT Angiogenic factors
Antisense oligonucleotides
Bone morphogenetic proteins
Cell adhesion molecules
Chemotactic factors
Cytokines
Hepatocyte growth factor
Macrophage migration inhibitory factor
Ribozymes
Transforming growth factors
p53 (protein)
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Prosthetic materials and Prosthetics**
(bioactive glass, as biocompatible substance; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Prosthetic materials and Prosthetics**
(ceramics, alumina, Bioceram, as biocompatible substance; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.1-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.2-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **Transforming growth factors**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.3-, as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9012-76-4, chitosan
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(as biocompatible substance (biol. matrix); in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT 1306-06-5, **hydroxyapatite** 9005-32-7, Alginic acid
11098-82-1, aluminate 24937-78-8, polyethylene vinyl acetate
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(as biocompatible substance; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

IT **61912-98-9P**, IGF **62031-54-3P**, FGF **62229-50-9P**,
EGF 62683-29-8P, Colony-stimulating factor 127464-60-2P, Vascular endothelial growth factor 250740-90-0P, Angiopoietin
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as cell growth stimulating agent; in situ bioreactors expressing systematically available bioactive agents and methods of use thereof in therapy)

L53 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:493334 HCAPLUS
DOCUMENT NUMBER: 133:125276
TITLE: Sustained delivery of polyionic bioactive agents
INVENTOR(S): Levy, Robert J.
PATENT ASSIGNEE(S): The Children's Hospital of Philadelphia, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041647	A1	20000720	WO 2000-US1317	20000119
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6395029	B1	20020528	US 1999-234011	19990119

PRIORITY APPLN. INFO.: US 1999-234011 A 19990119

AB The invention relates to compns. and methods for delivering a polyionic bioactive compn. such as a nucleic acid to a tissue of an animal. The compns. of the invention include compns. which comprise a matrix comprising the polyionic bioactive agent and wherein at least most of the polyionic bioactive agent at the exterior portion of the matrix is present in a condensed form. The invention also includes methods of making such compns., including particles, devices, bulk materials, and other objects which comprise, consist of, or are coated with such compns. Methods of delivering a polyionic bioactive agent to an animal tissue are also described. The invention further includes a method of storing a nucleic acid.

IC ICM A61F002-02
ICS A61F002-06; A61F013-00; A61K009-14; A61K009-16; A61K009-127; A61K047-00; A61K047-48

CC 63-5 (Pharmaceuticals)
IT Drug delivery systems
Prosthetic materials and Prosthetics
(implants; sustained delivery of nucleic acids and other polyionic bioactive agents)
IT Antisense oligonucleotides
Bone morphogenetic proteins
Cocoa butter
DNA
Ethylene-propylene rubber
Fluoropolymers, biological studies
Neoprene rubber, biological studies
Nitrile rubber, biological studies
Platelet-derived growth factors
Polyamides, biological studies
Polyanhydrides
Polycarbonates, biological studies
Polyesters, biological studies
Polyimides, biological studies
Polyoxyalkylenes, biological studies
Polysulfones, biological studies
Polyurethanes, biological studies
RNA
Rayon, biological studies
Ribozymes
Silicone rubber, biological studies
Stem cell factor
Waxes
cDNA
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sustained delivery of nucleic acids and other polyionic bioactive agents)
IT **Transforming growth factors**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(.beta.-; sustained delivery of nucleic acids and other polyionic bioactive agents)
IT 97-90-5, Ethylene glycol dimethacrylate 1306-06-5, **Hydroxyapatite** 6606-65-1 7440-06-4, Platinum, biological studies 7440-32-6, Titanium, biological studies 7758-87-4, Tricalcium phosphate 9002-06-6, Thymidine kinase 9002-64-6, Pth 9002-72-6, Growth hormone 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-17-2, Polybutadiene 9003-18-3, Acrylonitrile butadiene copolymer 9003-20-7, Polyvinylacetate 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-42-3, Polyethylmethacrylate 9003-53-6, Polystyrene 9003-56-9, Acrylonitrile butadiene styrene copolymer 9004-35-7, Cellulose acetate 9004-53-9, Dextrin **9004-54-0**, Dextran, biological studies 9005-32-7, Alginic acid 9011-14-7, Polymethylmethacrylate 9012-36-6, Agarose 9016-80-2, Polymethylpentene 9017-21-4, Polymethylstyrene 9046-31-5, Polystyrene carboxylic acid 10586-17-1, Isopropyl cyanoacrylate 12597-68-1, Stainless steel, biological studies 15802-18-3D, Cyanoacrylic acid, polyalkyl derivs. 21982-30-9, Hydroxymethyl methac rylate 24937-78-8, Ethylene vinyl acetate copolymer 24980-41-4, Polycaprolactone

24981-14-4, Polyvinyl fluoride 25068-26-2, Polymethylpentene 25087-26-7, Polymethacrylic acid 25102-52-7, Butadiene-isoprene copolymer 25248-42-4, Polycaprolactone 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 50851-57-5, Polystyrene sulfonic acid 61128-18-5, Caprolactone-glycolic acid copolymer **61912-98-9**, Insulin-like growth factor **62031-54-3**, Fgf 80137-67-3, Caprolactone-lactic acid copolymer 139639-23-9, Tissue plasminogen activator
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sustained delivery of nucleic acids and other polyionic bioactive agents)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:249066 HCAPLUS
DOCUMENT NUMBER: 130:287100
TITLE: Hydraulic surgical cements comprising calcium phosphate
INVENTOR(S): Lemaitre, Jaques; Bohner, Marc; Van Landuyt, Pascale
PATENT ASSIGNEE(S): H. C. Robert Mathys Stiftung, Switz.; Stratec Medical A.-G.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9917710	A1	19990415	WO 1998-EP6330	19981006
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2306562	AA	19990415	CA 1998-2306562	19981006
EP 1023032	A1	20000802	EP 1998-954344	19981006
EP 1023032	B1	20020102		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001518359	T2	20011016	JP 2000-514603	19981006
AT 211379	E	20020115	AT 1998-954344	19981006
ES 2170533	T3	20020801	ES 1998-954344	19981006
US 6425949	B1	20020730	US 2000-529054	20000707
PRIORITY APPLN. INFO.:			WO 1997-EP5495 A	19971007
			WO 1998-EP6330 W	19981006

AB The cement for surgical purposes comprises three components. The first component comprises .beta.-Ca3(PO4)2 (.beta.-TCP) particles; and Ca(H2PO4)2 (MCPA) or Ca(H2PO4)2.cntdot.H2O (MCPM) particles or phosphoric acid. The second component comprises water. The third component comprises particles having an av. diam. which is larger than the av. diam. of the .beta.-TCP particles of the first component. Upon mixing of the three components a hardened mass comprising brushite CaHPO4.cntdot.2H2O (DCPD) is formed. The .beta.-TCP particles have a sp. surface area of less than 10,000 m2/g and a Ca/P at. ratio different from 1.50. The component constitutes 1-99 % of the hardened mass. The cements according

to the invention may be used in dental and maxillofacial surgery (alveolar ridge reconstruction, dental socket filling), for orthopedic applications (bone fracture repair, bone augmentation) and for local drug delivery (antibiotics, anti-inflammatory and anti-cancer drugs).

IC ICM A61K006-033
ICS A61L025-00; A61L027-00

CC 63-7 (Pharmaceuticals)

IT **Growth factors, animal**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bone-derived, for drug delivery; hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT **Dental materials and appliances**
Medical goods
(cements; hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT 127-08-2, Potassium acetate 127-09-3 994-36-5, Sodium citrate 7320-34-5, Potassium pyrophosphate 7487-88-9, Magnesium sulfate, biological studies 7664-93-9, Sulfuric acid, biological studies 7722-88-5 7757-82-6, Sodium sulfate, biological studies 7758-16-9 7778-49-6, Potassium citrate 7778-80-5, Potassium sulfate, biological studies 7790-76-3, Calcium pyrophosphate 10034-76-1, **Calcium sulfate** hemihydrate 13598-36-2D, Phosphonic acid, alkylenebis-derivs., salts 35804-95-6 222719-60-0
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT 1306-06-5, **Hydroxyapatite**
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

IT **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-65-3, Hydroxypropyl methyl cellulose 9012-36-6, Agarose 9012-76-4, Chitosan 11138-66-2, Xanthan gum 25249-16-5 25322-68-3
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydraulic surgical cements comprising calcium phosphate and setting-rate controller and biodegradable polymers)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:222847 HCAPLUS
DOCUMENT NUMBER: 130:257353
TITLE: Inorganic-polymer complexes for the controlled release of compounds including medicinals
INVENTOR(S): Royer, Garfield P.
PATENT ASSIGNEE(S): Buford Biomedical, Inc., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9915150	A1	19990401	WO 1998-US19528	19980922
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6391336	B1	20020521	US 1997-935300	19970922
CA 2303884	AA	19990401	CA 1998-2303884	19980922
AU 9894925	A1	19990412	AU 1998-94925	19980922
EP 1017364	A1	20000712	EP 1998-948335	19980922
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001517613	T2	20011009	JP 2000-512521	19980922

PRIORITY APPLN. INFO.: US 1997-935300 A2 19970922
WO 1998-US19528 W 19980922

AB This invention relates generally to the prodn. and use of inorg.-polymer complexes for the controlled release of compds. including medicinals. Advantageously, the inorg. used is **calcium sulfate**.
CaSO4 1000, norfloxacin 50, and iodipamide 110 mg, all finely ground, were mixed and to this mixt. was added 0.6 mL of hyaluronic acid soln. (2 %). The slurry was mixed and loaded into the barrel of a syringe for administration or casting in a mold.

IC ICM A61K009-00
ICS A61K009-36

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 5

ST drug delivery matrix **calcium sulfate** hyaluronate

IT **Bone morphogenetic proteins**
Glycosaminoglycans, biological studies
Growth factors, animal
Lecithins
Lipids, biological studies
Pheromones, animal
Polynucleotides
Polyoxyalkylenes, biological studies
Proteins, general, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug delivery systems contg. inorg. compds. and matrix polymers and complexing agents)

IT 50-03-3, Hydrocortisone acetate 50-23-7 57-27-2, Morphine, biological studies 57-88-5, Cholest-5-en-3-ol (3.beta.)-, biological studies 59-46-1, Procaine 87-08-1, Penicillin V 112-38-9, 10-Undecenoic acid 124-07-2, Octanoic acid, biological studies 133-16-4, Chloroprocaine 137-58-6, Lidocaine 140-28-3, Benzathine 147-52-4, Nafcillin 154-21-2, Lincomycin 466-99-9, Hydromorphone 606-17-7, Iodipamide 721-50-6, Prilocaine 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1403-66-3, Gentamicin 1404-90-6, Vancomycin 1406-05-9, Penicillin 1406-11-7, Polymyxin 2203-97-6, Hydrocortisone succinate 6678-14-4 7585-39-9D, .beta.-Cyclodextrin, hydroxypropyl ethers 7778-18-9, **Calcium sulfate** 9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Polyacrylic acid 9003-39-8, PVP 9003-47-8, Polyvinylpyridine 9004-34-6, Cellulose, biological studies **9004-54-0**, Dextran, biological studies 9004-61-9, Hyaluronic

acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-65-6, Polysorbate 80 9007-28-7, Chondroitin sulfate 9042-14-2, Dextran sulfate 10118-90-8, Minocycline 11138-66-2, Xanthan gum 15663-27-1, cis-Platin 15686-71-2, Cephalexin 22199-08-2, Silver sulfadiazine 24991-23-9 25322-68-3 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 25953-19-9, Cefazolin 26063-13-8, Polyaspartic acid 26336-38-9, Polyvinylamine 26913-06-4, Poly[imino(1,2-ethanediyl)] 36637-18-0, Etidocaine 37517-28-5, Amikacin 38396-39-3, Bupivacaine 39831-55-5, Amikacin sulfate 52580-78-6, Polymyxin sulfate 53648-55-8, Dezocine 61477-96-1, Piperacillin 64221-86-9, Imipenem 70458-96-7, Norfloxacin 81103-11-9, Clarithromycin 85721-33-1, Ciprofloxacin 93106-60-6, Enrofloxacin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug delivery systems contg. inorg. compds. and matrix polymers and complexing agents)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:635680 HCAPLUS
DOCUMENT NUMBER: 129:265493
TITLE: Osteogenic devices and methods of use thereof for repair of bone
INVENTOR(S): Rueger, David C.; Tucker, Marjorie M.; Chang, An-cheng
PATENT ASSIGNEE(S): Creative Biomolecules, Inc., USA
SOURCE: PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9841246	A2	19980924	WO 1998-US6043	19980320
WO 9841246	A3	19981022		
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2001014662	A1	20010816	US 1997-822186	19970320
AU 9867795	A1	19981012	AU 1998-67795	19980320
AU 751451	B2	20020815		
EP 968012	A2	20000105	EP 1998-913183	19980320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001516262	T2	20010925	JP 1998-540868	19980320

PRIORITY APPLN. INFO.: US 1997-822186 A 19970320
WO 1998-US6043 W 19980320

AB Disclosed herein are improved osteogenic devices and methods of use thereof for repair of bone and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less osteogenic protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to crit. size defects, non-crit. size defects, non-union fractures, fractures, osteochondral defects, subchondral defects, and defects resulting from degenerative diseases such as osteochondritis dissecans.

IC ICM A61L027-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 2, 3
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(10; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(11; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(12; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(15; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(16; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(3; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(5; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(6; osteogenic devices and methods of use thereof for repair of bone)
IT **Bone morphogenetic proteins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(9; osteogenic devices and methods of use thereof for repair of bone)
IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF1, growth differentiation factor 1; osteogenic devices and methods of use thereof for repair of bone)
IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF10, growth differentiation factor 10; osteogenic devices and methods of use thereof for repair of bone)
IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF11, growth differentiation factor 11; osteogenic devices and methods of use thereof for repair of bone)
IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(GDF3, growth differentiation factor 3; osteogenic devices and methods of use thereof for repair of bone)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF6, growth differentiation factor 6; osteogenic devices and methods of use thereof for repair of bone)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF7, growth differentiation factor 7; osteogenic devices and methods of use thereof for repair of bone)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF8, growth differentiation factor 8; osteogenic devices and methods of use thereof for repair of bone)

IT **Growth factors, animal**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(GDF9, growth differentiation factor 9; osteogenic devices and methods of use thereof for repair of bone)

IT **Bone formation**
(repair; osteogenic devices and methods of use thereof for repair of bone)

IT 69-65-8, Mannitol 1306-06-5, **Hydroxyapatite** 7758-87-4, Tricalcium phosphate 9002-04-4, Thrombin 9004-32-4, Sodium carboxymethylcellulose 9004-34-6D, Cellulose, alkyl derivs., biological studies **9004-54-0**, Dextran, biological studies 9004-62-0, Hydroxyethylcellulose 9004-65-3 9004-67-5, Methylcellulose 9032-42-2, Methylhydroxyethylcellulose
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(osteogenic devices and methods of use thereof for repair of bone)

L53 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:253359 HCAPLUS
DOCUMENT NUMBER: 120:253359
TITLE: Biocompatible polymer conjugates of natural polymers
INVENTOR(S): Rhee, Woonza; Wallace, Donald G.; Michaels, Alan S.; Burns, Ramon A., Jr.; Fries, Louis; Delustro, Frank; Bentz, Hanne; Mccullough, Kimberly; Damani, Ramesh; Berg, Richard A.
PATENT ASSIGNEE(S): Collagen Corp., USA
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 18
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9401483	A1	19940120	WO 1993-US6292	19930701
W: AU, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5324775	A	19940628	US 1992-907518	19920702

US 5328955	A	19940712	US 1992-922541	19920730
US 5292802	A	19940308	US 1992-985680	19921202
US 5308889	A	19940503	US 1992-984197	19921202
AU 9346620	A1	19940131	AU 1993-46620	19930701
AU 677789	B2	19970508		
EP 648239	A1	19950419	EP 1993-916926	19930701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08502082	T2	19960305	JP 1993-503427	19930701

PRIORITY APPLN. INFO.:

US 1992-907518	A	19920702
US 1992-922541	A	19920730
US 1992-984197	A	19921202
US 1992-984933	A	19921202
US 1992-985680	A	19921202
US 1993-25032	A	19930302
US 1988-274071	B2	19881121
US 1989-433441	A2	19891114
WO 1993-US6292	A	19930701

AB Non-immunogenic conjugates are formed by covalently binding a biol. inactive, natural polymer or deriv. thereof to synthetic hydrophilic polymers, e.g. PEG, via specific types of chem. bonds. The biocompatible conjugates can be used for soft tissue augmentation and for coating or forming various articles. The compns. may include other components such as liq., pharmaceutically acceptable carriers to form injectable formulations, and/or biol. active proteins such as growth factors or cytokines. A soln. of transforming growth factor .beta.1 (TGF-.beta.1) was added to a soln. of difunctionally activated PEG and the mixt. was allowed tc react for 2 min at 17.degree.. To this soln. was added a fibrillar atelopeptide collagen soln. and the resulting mixt. allowed to incubate overnight at ambient temp. to form pellets comprising collagen-PEG-TGF-.beta.1 conjugate. After washing the pellets 6 times with phosphate buffer .apprx.50% of TGF-.beta.1 was retained in the compn.

IC ICM C08G063-48
ICS C08G063-91; C08H001-00; A61K037-12

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 38

IT **Animal growth regulators**
Glycosaminoglycans, biological studies
Interferons
Lymphokines and Cytokines
RL: BIOL (Biological study)
(conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, AA**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, AB**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**blood platelet-derived growth factors, BB**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**

RL: BIOL (Biological study)
(**bone morphogenetic proteins**, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(osteogenins, conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**.beta.-transforming growth factors**, conjugates with synthetic and natural polymers, pharmaceutical compn. contg.)

IT **Animal growth regulators**
RL: BIOL (Biological study)
(**.beta.2-transforming growth factors**, conjugates with synthetic and natural polymers, pharmaceutical compn. contg.)

IT 409-21-2, Silicon carbide, biological studies 1306-06-5, **Hydroxyapatite** 7758-87-4, Tricalcium phosphate 9002-84-0, Ptfe
RL: BIOL (Biological study)
(beads, pharmaceutical compn. contg. conjugates of natural and synthetic polymers and, for repair of bone defects)

IT **62229-50-9**, Epidermal growth factor
RL: BIOL (Biological study)
(conjugates with synthetic polymers, pharmaceutical compn. contg.)

IT 9004-34-6D, Cellulose, ethers, conjugates with synthetic polymers
9004-54-0D, Dextran, conjugates with synthetic polymers
9004-61-9D, Hyaluronic acid, conjugates with synthetic polymers
9004-62-0D, Hydroxyethyl cellulose, conjugates with synthetic polymers
9005-25-8D, Starch, conjugates with synthetic polymers 9061-61-4D, Nerve growth factor, conjugates with synthetic and natural polymers
11096-26-7D, Erythropoietin, conjugates with synthetic and natural polymers 12619-70-4D, Cyclodextrin, conjugates with synthetic polymers
24967-93-9D, Chondroitin sulfate a, conjugates with synthetic polymers
24967-94-0D, Dermatan sulfate, conjugates with synthetic polymers
25322-46-7D, Chondroitin sulfate c, conjugates with synthetic polymers
61912-98-9D, Insulin-like growth factor, conjugates with synthetic and natural polymers 62683-29-8D, Colony stimulating factor, conjugates with synthetic and natural polymers 69344-76-9D, Connective tissue-activating peptide I, conjugates with synthetic and natural polymers 106096-92-8D, Acidic fibroblast growth factor, conjugates with synthetic and natural polymers 106096-93-9D, Basic fibroblast growth factor, conjugates with synthetic and natural polymers 111575-54-3D, conjugates with collagen 154467-38-6D, conjugates with collagen 154467-39-7
RL: BIOL (Biological study)
(pharmaceutical compn. contg.)